



**Weston Solutions, Inc.**  
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US EPA RECORDS CENTER REGION 5



I-1  
8/6/03

August 6, 2004

Mr. Mike Ribordy  
On Scene Coordinator  
U.S. Environmental Protection Agency  
77 West Jackson Boulevard, SE5J  
Chicago, Illinois 60604

TDD No.: S05-0404-002

Subject: Preliminary Results from the Gilberts Kedzie and Tower Hill Road Site Assessments

Dear Mr. Ribordy:

The United States Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START) under Technical Direction Document (TDD) S05-0404-002 to assist U.S. EPA in conducting Site Assessment Activities at the Gilberts Kedzie and Tower Hill Road sites, Gilberts, Kane County, Illinois (Attachment A, Figure 1).

Since the early 1900's the sites have been used for tile manufacturing, scrap yard and a lead-acid battery recycling operations. The Gilberts Kedzie site is bound on the north and west by marsh area, on the south and southwest by residential properties, and on the east by the Chicago and Northwestern Railroad tracks. A pond, used for recreational fishing is also located southwest and adjacent to the Gilberts Kedzie site. The Gilberts Kedzie site is at a higher elevation than the surrounding land, therefore the topography at this site slopes towards the marsh and pond areas. The Tower Hill Road site is bound on the north and west by Tower Hill Road and the Chicago and Northwestern Railroad tracks, with residential properties adjacent to the tracks on the west, to the





Mr. Mike Ribordy  
U.S. EPA

Preliminary Results from the Gilberts Kedzie  
and Tower Hill Road Site Assessments

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south by additional residential properties and to the east by a marsh area. The topography at the Tower Hill Road site slopes towards the marsh area. Prior to conducting the site assessment activities, portions of the sites were unsecured, allowing trespassers to use the site for off-road vehicles and recreation.

**Gilberts Kedzie**

On August 28, 2004, U.S. EPA On-Scene Coordinator (OSC) Mike Ribordy; Illinois Environmental Protection Agency (IEPA) representatives Lance Range, Ken Corkill, Jason Thorp, Thomas Crouse; IEPA Public Relations representative, Carol Fuller; and WESTON START member Ron Bugg mobilized to the Gilberts Kedzie site to perform a two-day Site Assessment. Activities included collecting soil samples with a track-mounted Geoprobe® throughout the site, screening the soil samples with an X-Ray Fluorescence Spectrometer (XRF), documenting the latitude and longitude of sample locations with a GPS unit; and submitting 23 investigative soil samples to the U.S. EPA Central Regional Laboratory for analysis. Sample locations are presented in Attachment A, Figure 2.

All of the samples submitted to the laboratory were analyzed for Total Metals and 10 of the samples were also analyzed for Toxicity Characteristic Leaching Procedure (TCLP) Metals. Analytical Data is presented in Attachment B. Sample results for Total lead and TCLP lead are presented in Attachment C, Table 1 with the corresponding XRF screening results.

Each of the samples analyzed for Total lead exceeded the laboratory reporting limit, and 22 of the samples met or exceeded the 400 mg/kg soil remediation objective for lead for ingestion from industrial soils as identified in Section 35 Illinois Administrative Code, Part 742 - Tiered Approach to Corrective Action Objectives (TACO), Appendix B, Table B.



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Each of the samples analyzed for Total arsenic exceeded the laboratory reporting limit, and 19 of the samples met or exceeded the 13 mg/kg soil remediation objective for arsenic for ingestion from industrial soils as identified in TACO, Appendix B, Table B.

Each of the sample results analyzed for lead using the TCLP Method exceeded the reporting limits and seven of the 10 exhibited the characteristic of toxicity, as defined in 40 Code of Federal Regulations [CFR] 261.24 because the results were above the maximum concentration of contaminants for the toxicity characteristic for lead, which is 5.0 mg/L.

Based on these findings, conditions present at the Gilberts Kedzie site that warrant a removal action as set forth in paragraph (b)(2) of 40 CFR 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) include the following:

- Actual or potential exposure to nearby human populations, animals, or the food chain form hazardous substances or pollutants or contaminants; and
- High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.
- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

### Tower Hill Road

After discussions with former employees and residences it was identified that the Tower Hill Road site, located southwest of the Gilberts Kedzie site, was also used as a scrap yard to recycle batteries. Therefore, on June 3, 2004, U.S. EPA OSC Mike Ribordy, representatives from IEPA and WESTON START member Ron Bugg mobilized to the Tower Hill Road site to perform a Site Assessment. Activities included collecting soil samples with a track-mounted Geoprobe® throughout the site,



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U.S. EPA

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and Tower Hill Road Site Assessments

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screening the soil samples with an XRF, documenting the latitude and longitude of sample locations with a GPS unit; and submitting nine investigative soil samples to the U.S. EPA CRL for analysis. Sample locations are presented in Attachment A, Figure 3.

All of the nine samples submitted to the laboratory were analyzed for Total Metals and one of the samples was also analyzed for TCLP Metals. Analytical Data is presented in Attachment B. Sample results for Total lead and TCLP lead are presented on Attachment C, Table 2 with the corresponding XRF screening results.

Each of the samples analyzed for Total Lead exceeded the laboratory reporting limits for lead and all nine of the samples met or exceeded the TACO soil remediation objective for lead for ingestion from industrial soils of 400 mg/kg.

Each of the samples analyzed for Total arsenic exceeded the laboratory reporting limit, and eight of the samples met or exceeded TACO soil remediation objective for arsenic for ingestion from industrial soils of 13 mg/kg .

The sample analyzed for lead using the TCLP Method exceeded the reporting limit and exhibited the characteristic of toxicity as defined in 40 Code of Federal Regulations [CFR] 261.24 because the result was above the maximum concentration of contaminants for the toxicity characteristic for lead, which is 5.0 mg/L.

Based on these findings, conditions present at the Gilberts Kedzie site that warrant a removal action as set forth in paragraph (b)(2) of 40 CFR 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) include the following:



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Preliminary Results from the Gilberts Kedzie  
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- Actual or potential exposure to nearby human populations, animals, or the food chain form hazardous substances or pollutants or contaminants; and
- High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.
- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

Should you have any questions or require additional information, please feel free to contact us.

Very truly yours,

WESTON SOLUTIONS, INC.

A handwritten signature in black ink, appearing to read "Heidi M. Gorrill".

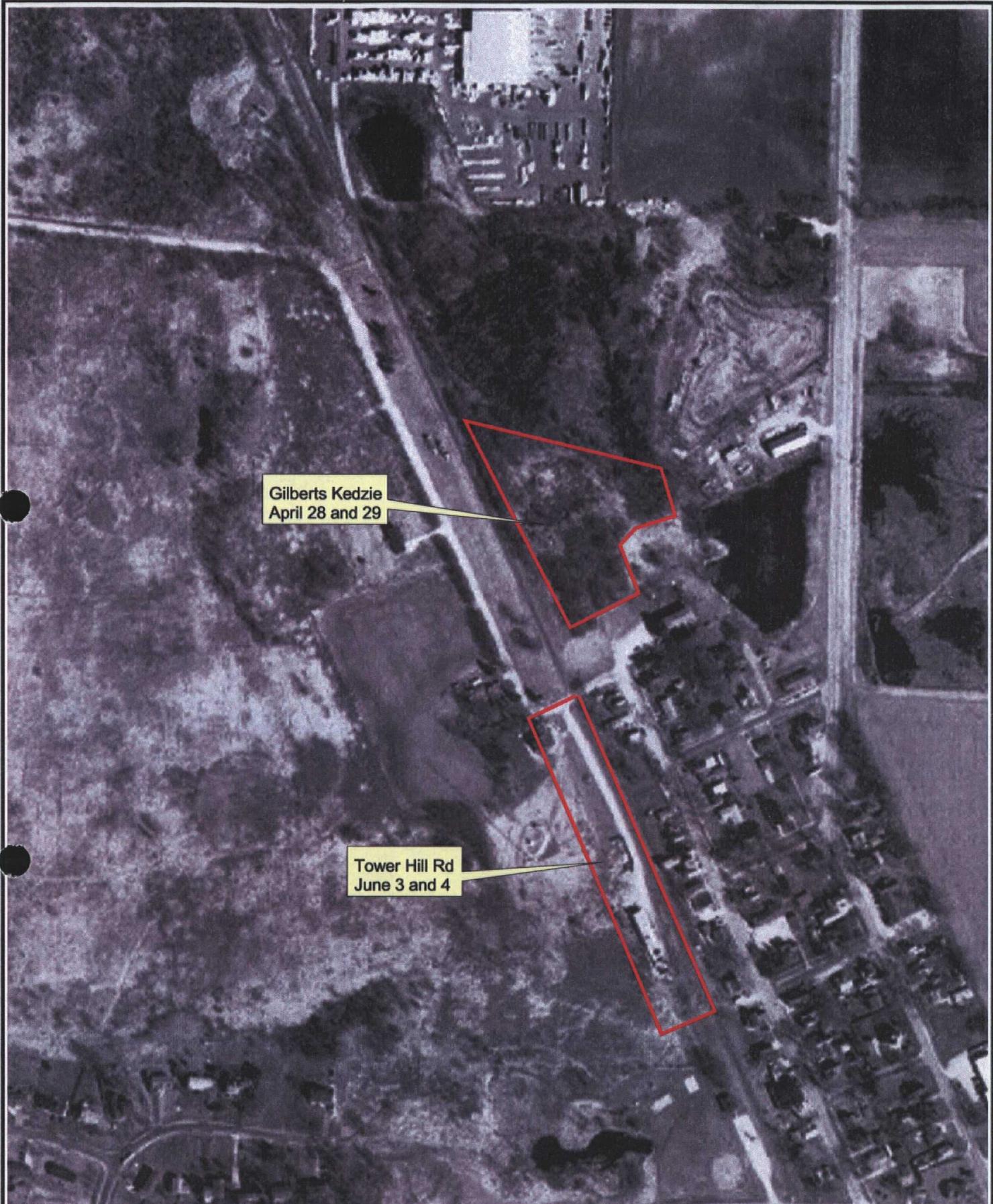
Heidi M. Gorrill  
START Project Manager

cc: Gail Nabasny, START Project Officer, U.S. EPA, Region V (SE-5J)  
file



**ATTACHMENT A**

**FIGURES**



0 100 Feet



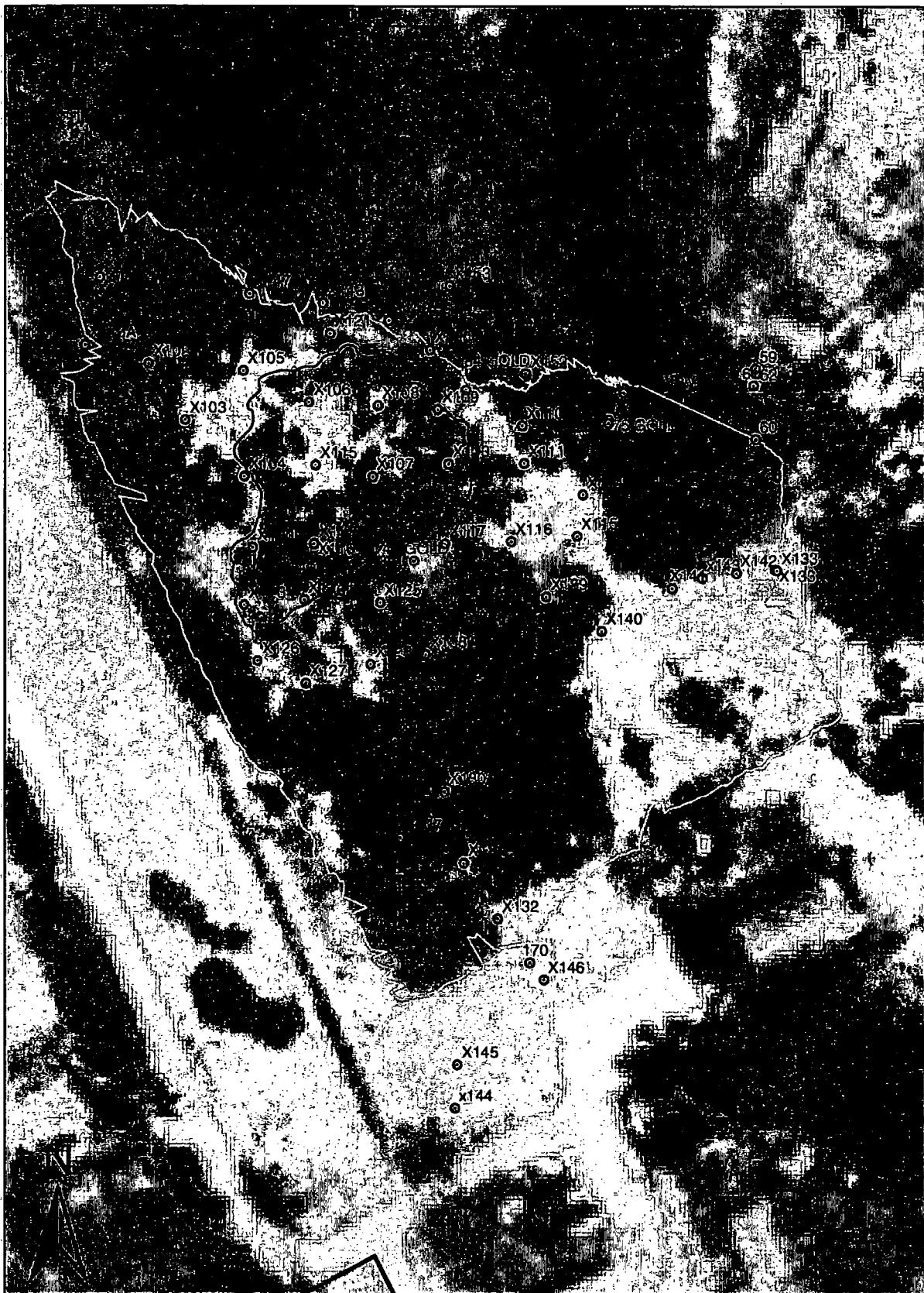
Source: IEPA/ISGS



Weston Solutions, Inc.  
70 W Madison Street, Suite 1990  
Chicago, IL 60602-4206

Site Location Map

Figure 1



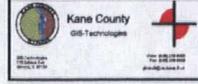
 Feet  
0 20 40 80 120 160

Source: IEPA/ISGS

## NOTES:

**NOTES:**  
Red dots indicate Geoprobe Locations, Green dots indicate Surface sample location without Geoprobe  
Yellow lines indicate Fenced area, Green lines indicate main open area with visible contamination

**Figure 2**  
**Gilberts Kedzie Sampling Locations**



Copyright © 2004 Kane County, Illinois  
Map Projection: Transverse Mercator  
State Plane - Illinois East, NAD 1983  
07/28/2004 jao

Map Projection: Transverse Mercator  
State Plane - Illinois East, NAD 1983

07/28/2004 jao



All boundaries are derived from 2001 Census Data unless otherwise noted.  
Latitude/longitude coordinates (UTM) will be provided by U.S. EPA.



**ATTACHMENT B**  
**ANALYTICAL RESULTS**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5 CENTRAL REGIONAL LABORATORY  
536 SOUTH CLARK STREET  
CHICAGO, ILLINOIS 60605

Date: JUN 10 2004

Subject: Review of Region 5 Data for **Gilbert Landfill (Gilbert, IL)**

From: **Marjorie Mattox, Chemist, ESAT/ALION**

Contractor to Region 5 Central Regional Laboratory

Submitted to EPA: *Marjorie L. Mattox, 6-10-04*

To: **Mike Ribordy**  
*SF - 5J*

Attached are the results for: **Gilbert Landfill (Gilbert, IL)**

CRL data set number: **E405001**

Samples analyzed for: **ICP Metals**

Results are reported for sample designations: **E405001-01 to -25**

*Sylvia Griffin* JUN 10 2004

Data Management Coordinator and Date Received

Date Transmitted: JUN 10, 2004

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

Received by and Date

Comments:

Attached are the results for: **Gilbert Landfill (Gilbert, IL)**

CRL data set number: **E405001**

Samples analyzed for: **ICP Metals**

Results are reported for sample designations: **E405001-01 to -25**

Rev. 4/10/02

000012

Parameter: ICP Metals

Method: CRL Metals 004 & Metals 025

Analyst: M. Mattox *M. Mattox*

Date: June 4, 2004 *6-4-04*

Work Orders: E405001

TDF: 5-02-016

Task Order: 05-1-22

JOB: 246-0-1476-202-077-001

### ICP NARRATIVE

This narrative covers the analysis of 25 soil samples from the Gilbert Landfill site. These samples were submitted to ESAT for ICP Metals analysis. The samples were collected between April 22 to 30, 2004. The samples were received properly preserved on May 3, 2004.

For a more detailed listing of sample ID, laboratory ID, field station ID, and sampling dates, refer to the Work Order pages and/or the initial LIMS report pages where such listings can be found.

Routine CRL SOP Metals 025 (soil) was used to prepare the soil samples for ICP analysis. The soil samples were digested on May 6, 2004 as LIMS batch EE40501. Attempts were made to complete the analysis but were unsuccessful due to problems with the instrument. Perkin Elmer was called to service the instrument. Analysis was then completed on May 28, 2004. Sample dilutions were analyzed on June 1, 2004. CRL SOP Metal 004 protocols were used during this analysis. All samples were analyzed within the holding time limit.

### ICP RUN RESULTS

CRL Method 004: In August 2003, new MDL's and RL's were established. Details of this analysis can be found in the EPA instrument logbook and IITRI logbook No.'s C31633 and C31843.

29 to 31 analyte lines out of a possible 78 lines available using the Optima 3300 DV method were chosen by a plan agreed upon by Dr. J. V. Morris. These are to be used for routine reporting of analyte values that appear in the QA summary reports.

### Analysis 052804 - Optima 3300 DV

The following analyte will be not addressed, all other analytes will not be discussed in this case narrative:

As, B, Ce, Li, Mo, Pb, Se, Sn, Sr, Ti, Tl, Y

Currently not enough data is available for Method 004 to establish QA/QC limits.

The following lists the case pertinent out-of-control QC audit check results based on default QA / QC (traditional) limits:

RUN 052804 :

Blanks: (Blank values are rounded)

Instr. Blk 1:	Cu324	-7.58	ug/L
	K766	-110.72	"
	Mn257	-1.41	"
	Na589	-78.79	"
	V310	-8.55	"
	Zn213	-15.26	"

000013

Instr. Blk 2:	Cu324	-6.52	"
	Mn257	-0.97	"
	Na589	-76.34	"
	V310	-12.66	"
Instr. Blk 3:	Ag328	2.61	"
	Be313	-0.28	"
	Cu324	-8.96	"
	K766	-182.46	"
	Mn257	-1.47	"
	Na589	-98.47	"
	V310	-22.99	"
	Zn213	-13.85	"
Instr. Blk 4:	Be313	-0.32	"
	Cu324	-10.15	"
	Mn257	-1.57	"
	Na589	-117.89	"
	V310	-23.69	"
	Zn213	-13.85	"
LCM1's:	LCM1 1:	Na589	***, 10.24      Percent deviation
	LCM1 4:	Zn213	10.07      "

\*\*\* level used for control purposes for sample values less than 10,000 ug/l, Hi AQC used for sample values greater than 10,000 ug/l.

Matrix QC:

Preparation Blank:	EE40501-BLK1:	Ag328	2.42	ug/L
		Cu324	-8.11	"
		K766	-117.69	"
		Mn257	-1.76	"
		Na589	-79.81	"
		V310	-12.46	"
		Zn213	-18.35	"
Matrix Duplicate:	EE40501-DUP1:	Ag328; <5X (difference)		
	EE40501-DUP2:	Ag328, Cd214, Co228; <5X (difference)		
	EE40501-DUP3:	Ag328, Cd214; <5X (difference)		

<5X was used to point out that the duplicate difference was used for QC evaluation purposes, the RPD was not always listed on the LIMS report.

Matrix Spike:	EE40501-MS1:	Pb220	#
	(Sed. & Ag/Mo/Sn)	Zn213	#

M. Martinez 6-4-04

**000014**

EE40501-MS2: (Hi Level)	Pb220	#
EE40501-MS4: (Sed. & Ag/Mo/Sn)	Pb220	#
EE40501-MS5: (Hi Level)	Pb220	#
EE40501-MS7: (Sed. & Ag/Mo/Sn)	Ba455 Cu324 Pb220 Zn213	# # # #
EE40501-MS8: (Hi Level)	Pb220	#

# audit not valid; sample concentration is greater than twice the spike concentration. The blank spike is used for validation purposes for these analytes.

LCS:           EE40501-SRM1:     Fe273     121.6 % Recovery  
   Na589     218.9 "

RUN 060104 :

Blanks: (Blank values are rounded)

Instr. Blk 1:	Cu324 Na589	-2.47 48.18	ug/L "
Instr. Blk 2:	Cu324	-2.43	"
Instr. Blk 3:	Cu324 Na589 Pb220	-1.60 35.48 360.9	" " "

RL check Soln:    RL 1:

(See paragraph below regarding rl's)

RL 2:

Presently no "control" actions are being implemented with the observed RL analyte values actually determined during the analysis run. RL check solution values currently are being analyzed for purposes of generating a benchmark set of values which can be used to monitor the appropriateness of any given RL level of analyte concentration.

All other quality control was acceptable per CRL SOP Metals 004.

Sample analyte qualifications:

Compilation of control chart information is still on-going for some of the check audits from Optima analysis runs. Data is currently being gathered for some QA audits. Until QA data from the new changes is more complete, the default CRL limits will be used.

The ICP sample results reported are acceptable except as noted in the following paragraphs.

For Ag, instrument blank #3 and EE40501-BLK1 showed a result which was above the MDL indicating possible contamination. Samples affected were E405001-02 to -14, -16 to -25, and are flagged "K". Also for Ag, sample results for E405001-03, -05, -07, -09, -11, -12, -14, -16 to -18, -20, -22, -23, -25, are flagged "J" since the values were between the MDL and RL.

For Ba, the Hi Spk is at the same level as the calibration standard. Adjustments will be made to the calibration standard to compensate for this in the future. The soil Hi Spk's EE40501-MS2, -MS5, -MS8, were reported from two fold dilutions due to the levels being above the calibration range.

For Be, the LCM1 is at the same level as the calibration standard. Adjustments will be made to the calibration standard to compensate for this in the future. Also for Be, instrument blanks #3 and #4 showed negative results with absolute values greater than the MDL. Positive sample results greater than the method detection limit affected by the blanks were E405001-11, -19, -21, -24. These samples are flagged "L" due to the possible low bias.

For Cd, sample results for E405001-03, -11, are flagged "J" since the values were between the MDL and RL.

For Co, sample results for E405001-11, -14 are flagged "J" since the values were between the MDL and RL.

For Cr, the Hi Spk is at the same level as the calibration standard. Adjustments will be made to the calibration standard to compensate for this in the future. No dilution was required for the Hi Spk's since all results were within 10% of the true value.

For Cu, the Hi Spk is at the same level as the calibration standard. Adjustments will be made to the calibration standard to compensate for this in the future. Also for Cu, samples E405001-06, -08, EE40501-MS8 (Hi Spk.) were reported from a two fold dilution due to the initial level being above the calibration range. No dilution was required for the remaining Hi Spk's since all results were within 10% of the true value.

For Fe, all sample results were reported from the 273 line. For Fe, the LCS showed a result which was above the upper control limit. Therefore all Fe results are flagged "K" due to this high bias.

For Mn, the Hi Spk is at the same level as the calibration standard. Adjustments will be made to the calibration standard to compensate for this in the future. The soil Hi Spk's EE40501-MS2, -MS5, -MS8, were reported from a two fold dilution due to the initial value being above the calibration range.

For Na, the LCM1 #1 showed a result which was below the lower control limit. Also for Na, the LCS showed a result which was above the upper control limit. Per Dr. John Morris, in this case the samples are evaluated by the LCM1 effect since the control limits for this audit are more precise. All Na sample results are therefore flagged "L" due to this QC low bias. For Na, all instrument blanks and EE40501-BLK1 showed results with an absolute value less than the MDL. Positive sample results greater than the method detection limit affected by the blanks were E405001-01, -05, -12, -14, -16, -21, -23. These samples are also flagged "L" due to this possible low bias.

For Ni, the Hi Spk is at the same level as the calibration standard. Adjustments will be made to the calibration standard to compensate for this in the future. For Ni, EE40501-MS2 (Hi Spk.) was reported from a two fold dilution due to the initial level being above the calibration range. No dilution was required for the remaining Hi Spk's since all results were within 10% of the true value.

M. Mattos 6-4-04

**000016**

For Pb, several samples were above the calibration range. Therefore a linearity check standard was analyzed at 500 mg/L to verify the accuracy at this level. Results showed good correlation. Two samples were above 500 mg/L and required dilution. Samples E405001-06, -13 were reported from two fold dilutions.

For V, all instrument blanks and EE40501-BLK1 showed negative results with absolute values less than the MDL. Positive sample results greater than the method detection limit affected by the blanks were E405001-01 to -25. These samples are flagged "L" due to the possible low bias.

For Zn, the Hi Spk is at the same level as the calibration standard. Adjustments will be made to the calibration standard to compensate for this in the future. For Zn, sample E405001-08, EE40501-MS2 (Hi Spk.), -MS8 (Hi Spk.) were reported from a two fold dilution, and sample E405001-13 was reported from a ten fold dilution due to the initial levels being above the calibration range. No dilution was required for the remaining Hi Spk since the result was within 10% of the true value. Also for Zn, LCM1 #4 showed results below the lower control limit. Therefore all Zn results reported from this run, E405001-01 to -07, -09 to -12, -14 to -25 are flagged "L" due to the possible low bias.

All flagged results are considered estimated. All sample results are usable.

**Other comments**

It has been observed that some LIMS report RPD calculations do not match all of our in house RPD calculations due to the number of significant figures used in the calculations.

No field QC were present for this work order.

no mention of dil



Superfund, US EPA Region 5  
77 West Jackson Boulevard.  
Chicago IL, 60604

UUUUUL  
**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-08-04 14:33

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
X102	E405001-01	Soil	Apr-28-04 10:50	May-03-04 10:43
X103	E405001-02	Soil	Apr-28-04 10:55	May-03-04 10:43
X104	E405001-03	Soil	Apr-28-04 11:05	May-03-04 10:43
X105	E405001-04	Soil	Apr-28-04 11:20	May-03-04 10:43
X106	E405001-05	Soil	Apr-28-04 11:35	May-03-04 10:43
X113	E405001-06	Soil	Apr-28-04 12:45	May-03-04 10:43
X114	E405001-07	Soil	Apr-28-04 12:55	May-03-04 10:43
X116	E405001-08	Soil	Apr-28-04 13:15	May-03-04 10:43
X117	E405001-09	Soil	Apr-28-04 13:45	May-03-04 10:43
X118	E405001-10	Soil	Apr-28-04 13:55	May-03-04 10:43
X119	E405001-11	Soil	Apr-28-04 14:15	May-03-04 10:43
X120	E405001-12	Soil	Apr-28-04 14:30	May-03-04 10:43
X121	E405001-13	Soil	Apr-28-04 14:45	May-03-04 10:43
X123	E405001-14	Soil	Apr-28-04 15:30	May-03-04 10:43
X124	E405001-15	Soil	Apr-28-04 16:15	May-03-04 10:43
X127	E405001-16	Soil	Apr-29-04 08:30	May-03-04 10:43
X128	E405001-17	Soil	Apr-29-04 08:45	May-03-04 10:43
X129	E405001-18	Soil	Apr-29-04 08:55	May-03-04 10:43
X131	E405001-19	Soil	Apr-29-04 09:15	May-03-04 10:43
X132	E405001-20	Soil	Apr-29-04 09:30	May-03-04 10:43
X142	E405001-21	Soil	Apr-29-04 09:45	May-03-04 10:43
X149	E405001-22	Soil	Apr-29-04 11:15	May-03-04 10:43
X153	E405001-23	Soil	Apr-29-04 13:15	May-03-04 10:43
X160	E405001-24	Soil	Apr-30-04 07:09	May-03-04 10:43
X161	E405001-25	Soil	Apr-30-04 07:08	May-03-04 10:43

M. Mattox  
Margie Mattox, Chemist

6-8-04

Report Name: E405001

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## Alion Science and Technology ESAT Region 5

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 Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
 77 West Jackson Boulevard  
 Chicago IL, 60604

Project: Gilbert Landfill  
 Project Number: [none]  
 Project Manager: Howard Pham

Reported:  
 Jun-08-04 14:33

**Metals by ICP**  
**Alion - ESAT Contract**

X102 (E405001-01) Soil Sampled: Apr-28-04 10:50 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	9300		6.0	20	mg/kg	I	EE40501	May-06-0	May-28-04
Barium	150		0.24	0.80		-	-	-	-
Beryllium	3.1		0.040	0.10		-	-	-	-
Cadmium	4.4		0.48	1.6		-	-	-	-
Calcium	6800		6.8	20		-	-	-	-
Chromium	9.7		1.4	5.0		-	-	-	-
Cobalt	13		1.2	4.0		-	-	-	-
Copper	30		0.30	1.0		-	-	-	-
Iron	28000	K	3.6	12		-	-	-	-
Lead	6500		16	50		-	-	-	-
Magnesium	2500		6.0	18		-	-	-	-
Manganese	670		0.16	0.50		-	-	-	-
Nickel	30		1.6	7.0		-	-	-	-
Potassium	1000		20	64		-	-	-	-
Silver	U		0.40	1.2		-	-	-	-
Sodium	170	L	6.0	20		-	-	-	-
Vanadium	22	L	1.4	5.0		-	-	-	-
Zinc	590	L	1.4	5.0		-	-	-	-

X103 (E405001-02) Soil Sampled: Apr-28-04 10:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	8500		6.0	20	mg/kg	I	EE40501	May-06-0	May-28-04
Barium	530		0.24	0.80		-	-	-	-
Beryllium	2.2		0.040	0.10		-	-	-	-
Cadmium	4.0		0.48	1.6		-	-	-	-
Calcium	5200		6.8	20		-	-	-	-
Chromium	29		1.4	5.0		-	-	-	-
Cobalt	6.2		1.2	4.0		-	-	-	-
Copper	440		0.30	1.0		-	-	-	-
Iron	63000	K	3.6	12		-	-	-	-
Lead	52000		16	50		-	-	-	-
Magnesium	1900		6.0	18		-	-	-	-
Manganese	230		0.16	0.50		-	-	-	-

M. Mattox 6-8-04  
 Margie Mattox, Chemist

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605

Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-08-04 14:33

**Metals by ICP**  
**Alion - ESAT Contract**

X103 (E405001-02) Soil Sampled: Apr-28-04 10:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	39		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
Potassium	1400		20	64					
Silver	1.7	K	0.40	1.2					
Sodium	290	L	6.0	20					
Vanadium	27	L	1.4	5.0					
Zinc	550	L	1.4	5.0					

X104 (E405001-03) Soil Sampled: Apr-28-04 11:05 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7200		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	140		0.24	0.80					
Beryllium	3.2		0.040	0.10					
Cadmium	1.0	J	0.48	1.6					
Calcium	5100		6.8	20					
Chromium	15		1.4	5.0					
Cobalt	6.8		1.2	4.0					
Copper	170		0.30	1.0					
Iron	45000	K	3.6	12					
Lead	15000		16	50					
Magnesium	2300		6.0	18					
Manganese	81		0.16	0.50					
Nickel	30		1.6	7.0					
Potassium	1700		20	64					
Silver	0.66	J, K	0.40	1.2					
Sodium	410	L	6.0	20					
Vanadium	27	L	1.4	5.0					
Zinc	190	L	1.4	5.0					

M. Mattox 6-8-04  
Margie Mattox, Chemist

Report Name: E405001

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Alion Science and Technology ESAT Region 5

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-08-04 14:33

Metals by ICP  
Alion - ESAT Contract

X105 (E405001-04) Soil Sampled: Apr-28-04 11:20 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	12000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	110		0.24	0.80	"	"	"	"	"
Beryllium	5.7		0.040	0.10	"	"	"	"	"
Cadmium	7.6		0.48	1.6	"	"	"	"	"
Calcium	48000		6.8	20	"	"	"	"	"
Chromium	11		1.4	5.0	"	"	"	"	"
Cobalt	11		1.2	4.0	"	"	"	"	"
Copper	52		0.30	1.0	"	"	"	"	"
Iron	32000	K	3.6	12	"	"	"	"	"
Lead	5600		16	50	"	"	"	"	"
Magnesium	22000		6.0	18	"	"	"	"	"
Manganese	490		0.16	0.50	"	"	"	"	"
Nickel	43		1.6	7.0	"	"	"	"	"
Potassium	1200		20	64	"	"	"	"	"
Silver	1.3	K	0.40	1.2	"	"	"	"	"
Sodium	540	L	6.0	20	"	"	"	"	"
Titanium	27	L	1.4	5.0	"	"	"	"	"
Zinc	800	L	1.4	5.0	"	"	"	"	"

X106 (E405001-05) Soil Sampled: Apr-28-04 11:35 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	11000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	130		0.24	0.80	"	"	"	"	"
Beryllium	1.9		0.040	0.10	"	"	"	"	"
Cadmium	2.5		0.48	1.6	"	"	"	"	"
Calcium	2900		6.8	20	"	"	"	"	"
Chromium	15		1.4	5.0	"	"	"	"	"
Cobalt	11		1.2	4.0	"	"	"	"	"
Copper	61		0.30	1.0	"	"	"	"	"
Iron	24000	K	3.6	12	"	"	"	"	"
Lead	750		16	50	"	"	"	"	"
Magnesium	2400		6.0	18	"	"	"	"	"
Manganese	480		0.16	0.50	"	"	"	"	"

11. Mattox 6-8-04

Margie Mattox, Chemist

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**

**536 South Clark Street, Suite 734; Chicago, IL 60605**  
**Telephone (312) 353-8302 Facsimile (312) 353-8307**

**Superfund, US EPA Region 5**  
**77 West Jackson Boulevard**  
**Chicago IL, 60604**

**Project: Gilbert Landfill**  
**Project Number: [none]**  
**Project Manager: Howard Pham**

**Reported:**  
**Jun-08-04 14:33**

**Metals by ICP**  
**Alion - ESAT Contract**

**X106 (E405001-05) Soil Sampled: Apr-28-04 11:35 Received: May-03-04 10:43**

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	21		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
Potassium	860		20	64	"	"	"	"	"
Silver	0.60	J, K	0.40	1.2	"	"	"	"	"
Sodium	36	L	6.0	20	"	"	"	"	"
Vanadium	25	L	1.4	5.0	"	"	"	"	"
Zinc	520	L	1.4	5.0	"	"	"	"	"

**X113 (E405001-06) Soil Sampled: Apr-28-04 12:45 Received: May-03-04 10:43**

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	12000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	460		0.24	0.80	"	"	"	"	"
Beryllium	5.5		0.040	0.10	"	"	"	"	"
Cadmium	2.8		0.48	1.6	"	"	"	"	"
Calcium	4700		6.8	20	"	"	"	"	"
Chromium	24		1.4	5.0	"	"	"	"	"
Cobalt	11		1.2	4.0	"	"	"	"	"
Copper	2000		0.60	2.0	"	2	"	"	Jun-01-04
Iron	48000	K	3.6	12	"	1	"	"	May-28-04
Lead	120000		32	100	"	2	"	"	Jun-01-04
Magnesium	820		6.0	18	"	1	"	"	May-28-04
Manganese	370		0.16	0.50	"	"	"	"	"
Nickel	39		1.6	7.0	"	"	"	"	"
Potassium	1100		20	64	"	"	"	"	"
Silver	3.0	K	0.40	1.2	"	"	"	"	"
Sodium	500	L	6.0	20	"	"	"	"	"
Vanadium	28	L	1.4	5.0	"	"	"	"	"
Zinc	460	L	1.4	5.0	"	"	"	"	"

*M. Mattox 6-8-04*  
 Margie Mattox, Chemist

Report Name: E405001

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Alion Science and Technology ESAT Region 5

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-08-04 14:33Metals by ICP  
Alion - ESAT Contract

K114 (E405001-07) Soil Sampled: Apr-28-04 12:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	10000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	160		0.24	0.80	"	"	"	"	"
Beryllium	2.4		0.040	0.10	"	"	"	"	"
Calcium	2.0		0.48	1.6	"	"	"	"	"
Calcium	8200		6.8	20	"	"	"	"	"
Chromium	12		1.4	5.0	"	"	"	"	"
Cobalt	7.9		1.2	4.0	"	"	"	"	"
Copper	230		0.30	1.0	"	"	"	"	"
Iron	21000	K	3.6	12	"	"	"	"	"
Lead	3200		16	50	"	"	"	"	"
Magnesium	3000		6.0	18	"	"	"	"	"
Manganese	440		0.16	0.50	"	"	"	"	"
Nickel	22		1.6	7.0	"	"	"	"	"
Potassium	1300		20	64	"	"	"	"	"
Silver	0.84	J, K	0.40	1.2	"	"	"	"	"
Sodium	250	L	6.0	20	"	"	"	"	"
Titanium	30	L	1.4	5.0	"	"	"	"	"
Zinc	350	L	1.4	5.0	"	"	"	"	"

K116 (E405001-08) Soil Sampled: Apr-28-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	11000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	590		0.24	0.80	"	"	"	"	"
Beryllium	2.1		0.040	0.10	"	"	"	"	"
Chromium	6.8		0.48	1.6	"	"	"	"	"
Calcium	16000		6.8	20	"	"	"	"	"
Chromium	28		1.4	5.0	"	"	"	"	"
Cobalt	8.1		1.2	4.0	"	"	"	"	"
Copper	1300		0.60	2.0	"	2	"	"	Jun-01-04
Iron	49000	K	3.6	12	"	1	"	"	May-28-04
Lead	43000		16	50	"	"	"	"	"
Magnesium	9200		6.0	18	"	"	"	"	"
Manganese	370		0.16	0.50	"	"	"	"	"

M. Mattox 6-8-04

Margie Mattox, Chemist

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
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Superfund US EPA Region 5  
 77 West Jackson Boulevard  
 Chicago IL 60604

Project: Gilbert Landfill  
 Project Number: [none]  
 Project Manager: Howard Pham

Reported:  
 Jun-08-04 14:33

**Metals by ICP**  
**Alion - ESAT Contract**

X116 (E40501-08) Soil Sampled: Apr-28-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	75		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
Potassium	1300		20	64	"	"	"	"	"
Silver	3.2	K	0.40	1.2	"	"	"	"	"
Sodium	260	L	6.0	20	"	"	"	"	"
Vanadium	28	L	1.4	5.0	"	"	"	"	"
Zinc	2500		2.8	10	"	2	"	"	Jun-01-04

X117 (E405001-09) Soil Sampled: Apr-28-04 13:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	13000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	120		0.24	0.80	"	"	"	"	"
Beryllium	11		0.040	0.10	"	"	"	"	"
Cadmium	8.7		0.48	1.6	"	"	"	"	"
Calcium	15000		6.8	20	"	"	"	"	"
Chromium	11		1.4	5.0	"	"	"	"	"
Cobalt	17		1.2	4.0	"	"	"	"	"
Copper	140		0.30	1.0	"	"	"	"	"
Iron	51000	K	3.6	12	"	"	"	"	"
Lead	9600		16	50	"	"	"	"	"
Magnesium	2500		6.0	18	"	"	"	"	"
Manganese	320		0.16	0.50	"	"	"	"	"
Nickel	71		1.6	7.0	"	"	"	"	"
Potassium	1400		20	64	"	"	"	"	"
Silver	0.89	J, K	0.40	1.2	"	"	"	"	"
Sodium	550	L	6.0	20	"	"	"	"	"
Vanadium	40	L	1.4	5.0	"	"	"	"	"
Zinc	890	L	1.4	5.0	"	"	"	"	"

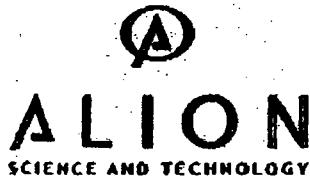
*Margie Mattox 6-8-04*

Margie Mattox, Chemist

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**

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Superfund, US-EPA Region 5  
 77 West Jackson Boulevard  
 Chicago IL, 60604

Project: Gilbert Landfill  
 Project Number: [none]  
 Project Manager: Howard Pham

Reported:  
 Jun-08-04 14:33

**Metals by ICP**  
**Alion - ESAT Contract**

X118 (E405001-10) Soil Sampled: Apr-28-04 13:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	5800		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	200		0.24	0.80					
Beryllium	2.2		0.040	0.10					
Cadmium	3.0		0.48	1.6					
Calcium	3300		6.8	20					
Chromium	18		1.4	5.0					
Cobalt	6.6		1.2	4.0					
Copper	400		0.30	1.0					
Ion	51000	K	3.6	12					
Lead	63000		16	50					
Magnesium	980		6.0	18					
Manganese	110		0.16	0.50					
Nickel	41		1.6	7.0					
Potassium	1900		20	64					
Silver	1.3	K	0.40	1.2					
Sodium	550	L	6.0	20					
Vanadium	27	L	1.4	5.0					
Zinc	380	L	1.4	5.0					

X119 (E405001-11) Soil Sampled: Apr-28-04 14:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	2900		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	160		0.24	0.80					
Beryllium	0.42	L	0.040	0.10					
Cadmium	0.57	J	0.48	1.6					
Calcium	12000		6.8	20					
Chromium	12		1.4	5.0					
Cobalt	2.9	J	1.2	4.0					
Copper	53		0.30	1.0					
Ion	55000	K	3.6	12					
Lead	55000		16	50					
Magnesium	460		6.0	18					
Manganese	56		0.16	0.50					

*M. Mattox 6-8-04*  
 Margie Mattox, Chemist

Report Name: E405001

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Alion Science and Technology ESAT Region 5

536 South Clark Street, Suite 734; Chicago, IL 60605  
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Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-08-04 14:33

**Metals by ICP**  
**Alion - ESAT Contract**

X119 (E405001-11) Soil Sampled: Apr-28-04 14:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	23		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
Potassium	2000		20	64					
Silver	1.1	J, K	0.40	1.2					
Sodium	350	L	6.0	20					
Vanadium	14	L	1.4	5.0					
Zinc	100	L	1.4	5.0					

X120 (E405001-12) Soil Sampled: Apr-28-04 14:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	99		0.24	0.80					
Beryllium	2.0		0.040	0.10					
Cadmium	5.4		0.48	1.6					
Calcium	9100		6.8	20					
Chromium	10		1.4	5.0					
Cobalt	6.8		1.2	4.0					
Copper	230		0.30	1.0					
Iron	19000	K	3.6	12					
Lead	5600		16	50					
Magnesium	3500		6.0	18					
Manganese	210		0.16	0.50					
Nickel	25		1.6	7.0					
Potassium	870		20	64					
Silver	0.70	J, K	0.40	1.2					
Sodium	93	L	6.0	20					
Vanadium	16	L	1.4	5.0					
Zinc	280	L	1.4	5.0					

Margie Maltox 6-8-04

Margie Maltox, Chemist

Report Name: E405001

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Superfund, US EPA Region 5  
 77 West Jackson Boulevard  
 Chicago IL, 60604

Project: Gilbert Landfill  
 Project Number: [none]  
 Project Manager: Howard Pham

Reported:  
 Jun-08-04 14:33

**Metals by ICP**  
**Alion - ESAT Contract**

X121 (E405001-13) Soil Sampled: Apr-28-04 14:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	15000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	1000		0.24	0.80	"	"	"	"	"
Beryllium	7.5		0.040	0.10	"	"	"	"	"
Cadmium	69		0.48	1.6	"	"	"	"	"
Calcium	21000		6.8	20	"	"	"	"	"
Chromium	43		1.4	5.0	"	"	"	"	"
Cobalt	17		1.2	4.0	"	"	"	"	"
Copper	900		0.30	1.0	"	"	"	"	"
Iron	100000	K	3.6	12	"	"	"	"	"
Lead	120000		32	100	"	2	"	"	Jun-01-04
Magnesium	6900		6.0	18	"	1	"	"	May-28-04
Manganese	500		0.16	0.50	"	"	"	"	"
Nickel	250		1.6	7.0	"	"	"	"	"
Potassium	1100		20	64	"	"	"	"	"
Silver	4.1	K	0.40	1.2	"	"	"	"	"
Sodium	510	L	6.0	20	"	"	"	"	"
Vanadium	26	L	1.4	5.0	"	"	"	"	"
Zinc	13000		14	50	"	10	"	"	Jun-01-04

X122 (E405001-14) Soil Sampled: Apr-28-04 15:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	1600		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	56		0.24	0.80	"	"	"	"	"
Beryllium	0.81		0.040	0.10	"	"	"	"	"
Cadmium	2.0		0.48	1.6	"	"	"	"	"
Calcium	2300		6.8	20	"	"	"	"	"
Chromium	5.1		1.4	5.0	"	"	"	"	"
Cobalt	3.8	J	1.2	4.0	"	"	"	"	"
Copper	82		0.30	1.0	"	"	"	"	"
Iron	13000	K	3.6	12	"	"	"	"	"
Lead	7500		16	50	"	"	"	"	"
Magnesium	900		6.0	18	"	"	"	"	"
Manganese	87		0.16	0.50	"	"	"	"	"

*M. Mattox 6-8-04*  
 Margie Mattox, Chemist

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**

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77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-08-04 14:33

**Metals by ICP**  
**Alion - ESAT Contract**

X123 (E405001-14) Soil Sampled: Apr-28-04 15:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	14		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
Potassium	410		20	64					
Silver	0.49	J, K	0.40	1.2					
Sodium	81	L	6.0	20					
Vanadium	5.0	L	1.4	5.0					
Zinc	200	L	1.4	5.0					

X124 (E405001-15) Soil Sampled: Apr-28-04 16:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	12000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	72		0.24	0.80					
Beryllium	9.1		0.040	0.10					
Cadmium	4.6		0.48	1.6					
Calcium	9500		6.8	20					
Chromium	19		1.4	5.0					
Cobalt	27		1.2	4.0					
Copper	800		0.30	1.0					
Iron	100000	K	3.6	12					
Lead	400		16	50					
Magnesium	4300		6.0	18					
Manganese	140		0.16	0.50					
Nickel	120		1.6	7.0					
Potassium	950		20	64					
Silver	U		0.40	1.2					
Sodium	260	L	6.0	20					
Vanadium	38	L	1.4	5.0					
Zinc	670	L	1.4	5.0					

M. Mattox

6-8-04

Margie Mattox, Chemist

Report Name: E405001

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## Alion Science and Technology ESAT Region 5

536 South Clark Street, Suite 734; Chicago, IL 60605

Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-08-04 14:33

Metals by ICP  
Alion - ESAT Contract

X127 (E405001-16) Soil Sampled: Apr-29-04 08:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	2800		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	78		0.24	0.80		"	"	"	"
Beryllium	1.1		0.040	0.10		"	"	"	"
Cadmium	5.0		0.48	1.6		"	"	"	"
Calcium	12000		6.8	20		"	"	"	"
Chromium	9.6		1.4	5.0		"	"	"	"
Cobalt	8.0		1.2	4.0		"	"	"	"
Copper	130		0.30	1.0		"	"	"	"
Iron	27000	K	3.6	12		"	"	"	"
Lead	27000		16	50		"	"	"	"
Magnesium	6100		6.0	18		"	"	"	"
Manganese	210		0.16	0.50		"	"	"	"
Nickel	32		1.6	7.0		"	"	"	"
Potassium	570		20	64		"	"	"	"
Silver	0.93	J, K	0.40	1.2		"	"	"	"
Sodium	200	L	6.0	20		"	"	"	"
Vanadium	11	L	1.4	5.0		"	"	"	"
Zinc	310	L	1.4	5.0		"	"	"	"

X128 (E405001-17) Soil Sampled: Apr-29-04 08:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	5500		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	110		0.24	0.80		"	"	"	"
Beryllium	1.0		0.040	0.10		"	"	"	"
Cadmium	3.1		0.48	1.6		"	"	"	"
Calcium	24000		6.8	20		"	"	"	"
Chromium	9.5		1.4	5.0		"	"	"	"
Cobalt	5.8		1.2	4.0		"	"	"	"
Copper	180		0.30	1.0		"	"	"	"
Iron	27000	K	3.6	12		"	"	"	"
Lead	27000		16	50		"	"	"	"
Magnesium	9100		6.0	18		"	"	"	"
Manganese	240		0.16	0.50		"	"	"	"

M. mattox 6-8-04  
Margie Mattox, Chemist

Report Name: E405001

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## Alion Science and Technology ESAT Region 5

536 South Clark Street, Suite 734; Chicago, IL 60605  
 Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
 77 West Jackson Boulevard  
 Chicago IL, 60604

Project: Gilbert Landfill.  
 Project Number: [none]  
 Project Manager: Howard Pham

Reported:  
 Jun-08-04 14:33

**Metals by ICP**  
**Alion - ESAT Contract**

X128 (E405001-17) Soil Sampled: Apr-29-04 08:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	21		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
Potassium	900		20	64	"	"	"	"	"
Silver	1.1	J, K	0.40	1.2	"	"	"	"	"
Sodium	240	L	6.0	20	"	"	"	"	"
Vanadium	18	L	1.4	5.0	"	"	"	"	"
Zinc	270	L	1.4	5.0	"	"	"	"	"

X129 (E405001-18) Soil Sampled: Apr-29-04 08:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7300		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	50		0.24	0.80	"	"	"	"	"
Beryllium	4.9		0.040	0.10	"	"	"	"	"
Cadmium	7.2		0.48	1.6	"	"	"	"	"
Calcium	87000		6.8	20	"	"	"	"	"
Chromium	9.1		1.4	5.0	"	"	"	"	"
Cobalt	9.1		1.2	4.0	"	"	"	"	"
Copper	41		0.30	1.0	"	"	"	"	"
Iron	35000	K	3.6	12	"	"	"	"	"
Lead	910		16	50	"	"	"	"	"
Magnesium	26000		6.0	18	"	"	"	"	"
Manganese	360		0.16	0.50	"	"	"	"	"
Nickel	38		1.6	7.0	"	"	"	"	"
Potassium	1100		20	64	"	"	"	"	"
Silver	1.1	J, K	0.40	1.2	"	"	"	"	"
Sodium	380	L	6.0	20	"	"	"	"	"
Vanadium	25	L	1.4	5.0	"	"	"	"	"
Zinc	1300	L	1.4	5.0	"	"	"	"	"

M. Mattox 6-8-04  
 Margie Mattox, Chemist

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-08-04 14:33**Metals by ICP**  
**Alion - ESAT Contract**

X131 (E405001-19) Soil Sampled: Apr-29-04 09:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	5800		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	91		0.24	0.80		"	"	"	"
Beryllium	0.50	L	0.040	0.10		"	"	"	"
Cadmium	4.9		0.48	1.6		"	"	"	"
Calcium	66000		6.8	20		"	"	"	"
Chromium	12		1.4	5.0		"	"	"	"
Cobalt	6.2		1.2	4.0		"	"	"	"
Copper	280		0.30	1.0		"	"	"	"
Iron	21000	K	3.6	12		"	"	"	"
Lead	47000		16	50		"	"	"	"
Magnesium	28000		6.0	18		"	"	"	"
Manganese	440		0.16	0.50		"	"	"	"
Nickel	27		1.6	7.0		"	"	"	"
Potassium	1400		20	64		"	"	"	"
Silver	2.9	K	0.40	1.2		"	"	"	"
Sodium	340	L	6.0	20		"	"	"	"
Vanadium	13	L	1.4	5.0		"	"	"	"
Zinc	330	L	1.4	5.0		"	"	"	"

X131 (E405001-20) Soil Sampled: Apr-22-04 09:30 Received: May-03-04 10:43

Analytic	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	10000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	120		0.24	0.80		"	"	"	"
Beryllium	4.1		0.040	0.10		"	"	"	"
Cadmium	2.9		0.48	1.6		"	"	"	"
Calcium	23000		6.8	20		"	"	"	"
Chromium	8.3		1.4	5.0		"	"	"	"
Cobalt	15		1.2	4.0		"	"	"	"
Copper	80		0.30	1.0		"	"	"	"
Iron	38000	K	3.6	12		"	"	"	"
Lead	1000		16	50		"	"	"	"
Magnesium	8300		6.0	18		"	"	"	"
Manganese	460		0.16	0.50		"	"	"	"

*M. Mettox* 6-8-04  
Margie Mettox, Chemist

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-08-04 14:33**Metals by ICP**  
**Alion - ESAT Contract**

X132 (E405001-20) Soil Sampled: Apr-22-04 09:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	46		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
Potassium	780		20	64	"	"	"	"	"
Silver	0.80	J, K	0.40	1.2	"	"	"	"	"
Sodium	250	L	6.0	20	"	"	"	"	"
Vanadium	23	L	1.4	5.0	"	"	"	"	"
Zinc	430	L	1.4	5.0	"	"	"	"	"

X142 (E405001-21) Soil Sampled: Apr-29-04 09:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7700		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	340		0.24	0.80	"	"	"	"	"
Beryllium	0.61	L	0.040	0.10	"	"	"	"	"
Cadmium	1.7		0.48	1.6	"	"	"	"	"
Calcium	37000		6.8	20	"	"	"	"	"
Chromium	20		1.4	5.0	"	"	"	"	"
Cobalt	7.0		1.2	4.0	"	"	"	"	"
Copper	550		0.30	1.0	"	"	"	"	"
Iron	22000	K	3.6	12	"	"	"	"	"
Lead	5400		16	50	"	"	"	"	"
Magnesium	15000		6.0	18	"	"	"	"	"
Manganese	650		0.16	0.50	"	"	"	"	"
Nickel	22		1.6	7.0	"	"	"	"	"
Potassium	1500		20	64	"	"	"	"	"
Silver	1.2	K	0.40	1.2	"	"	"	"	"
Sodium	190	L	6.0	20	"	"	"	"	"
Vanadium	25	L	1.4	5.0	"	"	"	"	"
Zinc	830	L	1.4	5.0	"	"	"	"	"

*M. Mattox* 6-8-04

Margie Mattox, Chemist

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605

Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none].  
Project Manager: Howard Pham

Reported:  
Jun-08-04 14:33

**Metals by ICP****Alion - ESAT Contract**

X149 (E405001-22) Soil Sampled: Apr-29-04 11:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	11000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	140		0.24	0.80		"	"	"	"
Beryllium	8.6		0.040	0.10		"	"	"	"
Cadmium	6.6		0.48	1.6		"	"	"	"
Calcium	44000		6.8	20		"	"	"	"
Chromium	9.9		1.4	5.0		"	"	"	"
Cobalt	19		1.2	4.0		"	"	"	"
Copper	68		0.30	1.0		"	"	"	"
Iron	58000	K	3.6	12		"	"	"	"
Lead	620		16	50		"	"	"	"
Magnesium	18000		6.0	18		"	"	"	"
Manganese	460		0.16	0.50		"	"	"	"
Nickel	68		1.6	7.0		"	"	"	"
Potassium	1600		20	64		"	"	"	"
Silver	1.2	J, K	0.40	1.2		"	"	"	"
Sodium	450	L	6.0	20		"	"	"	"
Vanadium	27	L	1.4	5.0		"	"	"	"
Zinc	1000	L	1.4	5.0		"	"	"	"

153 (E405001-23) Soil Sampled: Apr-29-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	12000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	120		0.24	0.80		"	"	"	"
Beryllium	0.66		0.040	0.10		"	"	"	"
Cadmium	U		0.48	1.6		"	"	"	"
Calcium	5800		6.8	20		"	"	"	"
Chromium	17		1.4	5.0		"	"	"	"
Cobalt	10		1.2	4.0		"	"	"	"
Copper	30		0.30	1.0		"	"	"	"
Iron	33000	K	3.6	12		"	"	"	"
Lead	360		16	50		"	"	"	"
Magnesium	4100		6.0	18		"	"	"	"
Manganese	240		0.16	0.50		"	"	"	"

M. Mattox 6-8-04

Marge Mattox, Chemist

Report Name: E405001

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## Alion Science and Technology ESAT Region 5

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-08-04 14:33Metals by ICP  
Alion - ESAT Contract

X153 (E405001-23) Soil Sampled: Apr-29-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	23		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
Potassium	1000		20	64	"	"	"	"	"
Silver	0.70	J, K	0.40	1.2	"	"	"	"	"
Sodium	65	L	6.0	20	"	"	"	"	"
Vanadium	29	L	1.4	5.0	"	"	"	"	"
Zinc	67	L	1.4	5.0	"	"	"	"	"

X160 (E405001-24) Soil Sampled: Apr-30-04 07:09 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7100		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Barium	510		0.24	0.80	"	"	"	"	"
Beryllium	0.57	L	0.040	0.10	"	"	"	"	"
Cadmium	1.7		0.48	1.6	"	"	"	"	"
Calcium	38000		6.8	20	"	"	"	"	"
Chromium	21		1.4	5.0	"	"	"	"	"
Cobalt	6.9		1.2	4.0	"	"	"	"	"
Copper	260		0.30	1.0	"	"	"	"	"
Iron	31000	K	3.6	12	"	"	"	"	"
Lead	6200		16	50	"	"	"	"	"
Magnesium	12000		6.0	18	"	"	"	"	"
Manganese	510		0.16	0.50	"	"	"	"	"
Nickel	26		1.6	7.0	"	"	"	"	"
Potassium	1200		20	64	"	"	"	"	"
Silver	1.3	K	0.40	1.2	"	"	"	"	"
Sodium	290	L	6.0	20	"	"	"	"	"
Vanadium	21	L	1.4	5.0	"	"	"	"	"
Zinc	1100	L	1.4	5.0	"	"	"	"	"

Margie Mattox, Chemist

6-8-04

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-08-04 14:33

**Metals by ICP****Alion - ESAT Contract**

X161 (E405001-25) Soil Sampled: Apr-30-04 07:08 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	12000		6.0	20	mg/kg	1	E40501	May-06-0	May-28-04
Barium	75		0.24	0.80	"	"	"	"	"
Beryllium	11		0.040	0.10	"	"	"	"	"
Cadmium	4.7		0.48	1.6	"	"	"	"	"
Calcium	18000		6.8	20	"	"	"	"	"
Chromium	17		1.4	5.0	"	"	"	"	"
Cobalt	21		1.2	4.0	"	"	"	"	"
Copper	780		0.30	1.0	"	"	"	"	"
Iron	83000	K	3.6	12	"	"	"	"	"
Lead	680		16	50	"	"	"	"	"
Magnesium	8000		6.0	18	"	"	"	"	"
Manganese	190		0.16	0.50	"	"	"	"	"
Nickel	83		1.6	7.0	"	"	"	"	"
Potassium	1100		20	64	"	"	"	"	"
Silver	0.57	J, K	0.40	1.2	"	"	"	"	"
Sodium	300	L	6.0	20	"	"	"	"	"
Vanadium	32	L	1.4	5.0	"	"	"	"	"
Zinc	770	L	1.4	5.0	"	"	"	"	"

M. Mattox 6-8-04  
Margie Mattox, Chemist

Report Name: E405001

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**ALION**  
SCIENCE AND TECHNOLOGY

000035  
**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-08-04 14:33

### Notes and Definitions

- # Spike audit not valid. The sample concentration exceeds twice the concentration of the spike added. No qualification made for this QC audit.
- <5X One or both concentration values for the duplicate analysis audit were less than 5 times the MDL value AND the difference between the two values was less than the MDL value. The duplicate audit is acceptable. No qualification made for this QC audit.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- U Not Detected
- NR Not Reported

M. Mattox 6-8-04  
Margie Mattox, Chemist

Report Name: E405001  
Page 19 of 19



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: JUN 03 2004

Subject: Review of Region 5 Data for Gilbert Landfill

From: Stephen Connet, Chemist, Alion Science and Technology / ESAT  
Contractor to Region 5 Central Regional Laboratory  
Submitted to CRL on 6-3-04 *[Signature]*

To: MIKE RIBORDY  
SE-5J

Attached are the results for: Gilbert Landfill

CRL data set numbers: E405001

Samples analyzed for: GFAA Arsenic, Selenium

Results are reported for sample designations: E405001-1 thru -25

*Sylvia Griffin*

JUN 03 2004

Data Management Coordinator and Date Received

Date Transmitted: JUN 03 2004

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

Received by and Date

Comments:

Attached are the results for: Gilbert Landfill

CRL data set numbers: E405001

Samples analyzed for: GFAA Arsenic, Selenium

Results are reported for sample designations: E405001-1 thru -25

**Method: 200.9 (GFAA Metals)**  
**Site: Gilbert Landfill**  
**Date: May 18, 2004**  
**Prepared by: Stephen Connet**

**TDF: 5-22-016**  
**Alion Job #: 246-0-1476-202-077-001**  
**Task Order #: 05-1-22**  
**Data Set: E405001**

### NARRATIVE

Twenty five (25) soil samples from the Gilbert LF site were collected between April 22 and 30, 2004 and were received by CRL on May 3, 2004. The samples were submitted to ESAT for analysis of arsenic and selenium by GFAA. The sample point identifications are on the first page of the LIMS report following this narrative.

The samples were digested following standard CRL 200.2 hot block digestion protocols (CRL SOP METALS025) on May 6, 2004 (digestion batch EE40501). All analyses were performed between May 10 and 14, 2004 using 200.9 methods (CRL SOP's METALS019). Reanalysis of 3 samples (E405001-18, -19 and -20) for arsenic was performed on the SimAA 6000 using the multi-element arsenic/selenium program when it was discovered that diluted results were not consistent with undiluted results for those samples. QC limits are based on ESAT control limits; CRL default limits are used if ESAT limits are greater than CRL limits. Soil LCS values for arsenic and selenium are based on ESAT "floating means" per Dr. J. V. Morris of U.S. EPA.

No samples are identified as field duplicates. Because reported QC values are less than 5 times the MDL for all selenium duplicates, the duplicate difference criteria are used for control purposes for those samples; the matrix duplicates for selenium are flagged "<5X" in LIMS. It has been observed that, due to differences in the significant figures used for calculation, RPD values calculated by LIMS are not correct. All QC were within limits. All samples were analyzed within the holding time limit.

Non-detect results are reported to the reporting limit (RL). The following results between the method detection limit (MDL) and the RL are reported as the instrument value with a "P" flag and are considered estimated: E405001-01, -02, -05, -07, -09, -13, -15, -16 and -25 for selenium. The presence of interference required some samples to be diluted in order to meet analytical spike recovery criteria. All reported values are adjusted for dilution except E405001-12 selenium. All other sample results are acceptable. Where appropriate, reported values are dilution corrected.

QC reports which include analytical QC are provided as Lotus spreadsheets. Logbook entries for this metals analysis can be found in Alion logbook C31845 page 15.

*[Handwritten signature]*  
6-2-04  
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**ALION**  
SCIENCE AND TECHNOLOGY

**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

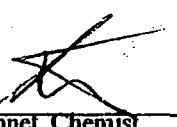
Reported:  
Jun-01-04 08:57

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
X102	E405001-01	Soil	Apr-28-04 10:50	May-03-04 10:43
X103	E405001-02	Soil	Apr-28-04 10:55	May-03-04 10:43
X104	E405001-03	Soil	Apr-28-04 11:05	May-03-04 10:43
X105	E405001-04	Soil	Apr-28-04 11:20	May-03-04 10:43
X106	E405001-05	Soil	Apr-28-04 11:35	May-03-04 10:43
X113	E405001-06	Soil	Apr-28-04 12:45	May-03-04 10:43
X114	E405001-07	Soil	Apr-28-04 12:55	May-03-04 10:43
X116	E405001-08	Soil	Apr-28-04 13:15	May-03-04 10:43
X117	E405001-09	Soil	Apr-28-04 13:45	May-03-04 10:43
X118	E405001-10	Soil	Apr-28-04 13:55	May-03-04 10:43
X119	E405001-11	Soil	Apr-28-04 14:15	May-03-04 10:43
X120	E405001-12	Soil	Apr-28-04 14:30	May-03-04 10:43
X121	E405001-13	Soil	Apr-28-04 14:45	May-03-04 10:43
X123	E405001-14	Soil	Apr-28-04 15:30	May-03-04 10:43
X124	E405001-15	Soil	Apr-28-04 16:15	May-03-04 10:43
X127	E405001-16	Soil	Apr-29-04 08:30	May-03-04 10:43
X128	E405001-17	Soil	Apr-29-04 08:45	May-03-04 10:43
X129	E405001-18	Soil	Apr-29-04 08:55	May-03-04 10:43
X131	E405001-19	Soil	Apr-29-04 09:15	May-03-04 10:43
X132	E405001-20	Soil	Apr-22-04 09:30	May-03-04 10:43
X142	E405001-21	Soil	Apr-29-04 09:45	May-03-04 10:43
X149	E405001-22	Soil	Apr-29-04 11:15	May-03-04 10:43
X153	E405001-23	Soil	Apr-29-04 13:15	May-03-04 10:43
X160	E405001-24	Soil	Apr-30-04 07:09	May-03-04 10:43
X161	E405001-25	Soil	Apr-30-04 07:08	May-03-04 10:43

000013

6-1-04

  
Stephen Connet, Chemist

Report Name: E405001

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**ALION**  
SCIENCE AND TECHNOLOGY

**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-01-04 08:57

**Metals by GFAA**

**Alion - ESAT Contract**

102 (E405001-01) Soil Sampled: Apr-28-04 10:50 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	15		0.60	2.4	mg/kg	6	EE40501	May-06-0	May-11-04
chromium	0.53	J	0.40	1.6	"	2	"	"	May-12-04

103 (E405001-02) Soil Sampled: Apr-28-04 10:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	65		2.0	8.0	mg/kg	20	EE40501	May-06-0	May-11-04
chromium	1.1	J	1.0	4.0	"	5	"	"	May-12-04

104 (E405001-03) Soil Sampled: Apr-28-04 11:05 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	42		1.0	4.0	mg/kg	10	EE40501	May-06-0	May-11-04
chromium	U		1.0	4.0	"	5	"	"	May-12-04

105 (E405001-04) Soil Sampled: Apr-28-04 11:20 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	25		1.0	4.0	mg/kg	10	EE40501	May-06-0	May-11-04
chromium	U		0.40	1.6	"	2	"	"	May-12-04

106 (E405001-05) Soil Sampled: Apr-28-04 11:35 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	9.7		0.40	1.6	mg/kg	4	EE40501	May-06-0	May-11-04
chromium	0.55	J	0.40	1.6	"	2	"	"	May-12-04

113 (E405001-06) Soil Sampled: Apr-28-04 12:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	84		2.0	8.0	mg/kg	20	EE40501	May-06-0	May-11-04
chromium	U		2.0	8.0	"	10	"	"	May-12-04

6-1-04

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Report Name: E405001

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**Alion Science and Technology ESAT Region 5**

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Superfund, US EPA Region 5  
17 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-01-04 08:57

**Metals by GFAA**  
**Alion - ESAT Contract**

114 (E405001-07) Soil Sampled: Apr-28-04 12:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	12		0.40	1.6	mg/kg	4	EE40501	May-06-0	May-11-04
elenium	0.68	J	0.40	1.6	"	2	"	"	May-12-04

116 (E405001-08) Soil Sampled: Apr-28-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	59		2.0	8.0	mg/kg	20	EE40501	May-06-0	May-11-04
elenium	U		1.0	4.0	"	5	"	"	May-12-04

117 (E405001-09) Soil Sampled: Apr-28-04 13:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	39		1.0	4.0	mg/kg	10	EE40501	May-06-0	May-11-04
elenium	0.65	J	0.40	1.6	"	2	"	"	May-12-04

118 (E405001-10) Soil Sampled: Apr-28-04 13:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	70		2.0	8.0	mg/kg	20	EE40501	May-06-0	May-11-04
elenium	U		2.0	8.0	"	10	"	"	May-12-04

119 (E405001-11) Soil Sampled: Apr-28-04 14:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	82		2.0	8.0	mg/kg	20	EE40501	May-06-0	May-11-04
elenium	U		2.0	8.0	"	10	"	"	May-12-04

120 (E405001-12) Soil Sampled: Apr-28-04 14:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	16		0.50	2.0	mg/kg	5	EE40501	May-06-0	May-11-04
elenium	1.0		0.20	0.80	"	1	"	"	May-12-04

6-1-04

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Report Name: E405001

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Superfund, US EPA Region 5  
7 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-01-04 08:57

**Metals by GFAA**  
**Alion - ESAT Contract**

121 (E405001-13) Soil Sampled: Apr-28-04 14:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	290		10	40	mg/kg	100	EE40501	May-06-0	May-11-04
Cadmium	2.5	J	2.0	8.0	"	10	"	"	May-12-04

123 (E405001-14) Soil Sampled: Apr-28-04 15:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	17		0.50	2.0	mg/kg	5	EE40501	May-06-0	May-11-04
Cadmium	1.7		0.40	1.6	"	2	"	"	May-12-04

124 (E405001-15) Soil Sampled: Apr-28-04 16:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	100		4.0	16	mg/kg	40	EE40501	May-06-0	May-11-04
Cadmium	0.55	J	0.40	1.6	"	2	"	"	May-12-04

127 (E405001-16) Soil Sampled: Apr-29-04 08:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	35		1.0	4.0	mg/kg	10	EE40501	May-06-0	May-11-04
Cadmium	1.2	J	1.0	4.0	"	5	"	"	May-12-04

128 (E405001-17) Soil Sampled: Apr-29-04 08:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	26		1.0	4.0	mg/kg	10	EE40501	May-06-0	May-11-04
Cadmium	U		1.0	4.0	"	5	"	"	May-12-04

129 (E405001-18) Soil Sampled: Apr-29-04 08:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	29		1.0	4.0	mg/kg	10	EE40501	May-06-0	May-14-04
Cadmium	U		0.40	1.6	"	2	"	"	May-12-04

6-1-04

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Report Name: E405001

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SCIENCE AND TECHNOLOGY

**Alion Science and Technology ESAT Region 5**

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uperfund, US EPA Region 5  
7 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-01-04 08:57

**Metals by GFAA**  
**Alion - ESAT Contract**

31 (E405001-19) Soil Sampled: Apr-29-04 09:15 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
zinc	84		2.0	8.0	mg/kg	20	EE40501	May-06-0	May-14-04
ladium	U		1.0	4.0	"	5	"	"	May-12-04

32 (E405001-20) Soil Sampled: Apr-22-04 09:30 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
zinc	24		0.50	2.0	mg/kg	5	EE40501	May-06-0	May-14-04
ladium	U		0.40	1.6	"	2	"	"	May-12-04

42 (E405001-21) Soil Sampled: Apr-29-04 09:45 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
zinc	7.6		0.20	0.80	mg/kg	2	EE40501	May-06-0	May-11-04
ladium	U		0.40	1.6	"	"	"	"	May-12-04

49 (E405001-22) Soil Sampled: Apr-29-04 11:15 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
zinc	30		1.0	4.0	mg/kg	10	EE40501	May-06-0	May-11-04
ladium	U		0.40	1.6	"	2	"	"	May-12-04

53 (E405001-23) Soil Sampled: Apr-29-04 13:15 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
zinc	8.4		0.20	0.80	mg/kg	2	EE40501	May-06-0	May-11-04
ladium	U		0.40	1.6	"	"	"	"	May-12-04

60 (E405001-24) Soil Sampled: Apr-30-04 07:09 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
zinc	15		0.60	2.4	mg/kg	6	EE40501	May-06-0	May-11-04
ladium	U		0.40	1.6	"	2	"	"	May-12-04

6-1-04

000017

Stephen Connel, Chemist

Report Name: E405001

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(A)

**ALION**  
SCIENCE AND TECHNOLOGY

**Alion Science and Technology ESAT Region 5**

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Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-01-04 08:57

**Metals by GFAA**

**Alion - ESAT Contract**

X161 (E405001-25) Soil Sampled: Apr-30-04 07:08 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	84		2.0	8.0	mg/kg	20	EE40501	May-06-0	May-11-04
Selenium	0.41	J	0.40	1.6	"	2	"	"	May-12-04

6-1-04

000018

Stephen Conner Chemist

Report Name: E405001  
Page 6 of 7



**ALION**  
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**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
17 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-01-04 08:57

**Notes and Definitions**

**SX** One or both concentration values for the duplicate analysis audit were less than 5 times the MDL value AND the difference between the two values was less than the MDL value. The duplicate audit is acceptable. No qualification made for this QC audit.  
The identification of the analyte is acceptable; the reported value is an estimate.

**J** Not Detected  
**NR** Not Reported

000019

6-1-09

  
Stephen Conner, Chemist

Report Name: E405001  
Page 7 of 7

**CENTRAL REGIONAL LABORATORY**  
**ESAT Data Checklist**

Work Order SF E405001      Gilbert Landfill  
                                        Mercury Total CVAA

- Chain of Custody**
- Final report from LIMS UPDATE 15:37 PM**
- TDF Completion form signed by TOPO**
- Analytical and Data Review Checklist**
- Transmittal Memo w/signatures of the following:**
  - **Analyst(s)**
  - **Environmental Data Coordinator**

Prepared by Sylvia Griffin 6-3-04  
Environmental Data Coordinator



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: JUN 03 2004

Subject: Review of Region 5 Data for Gilbert Landfill (Gilbert, IL)

From: Richard Baltrus, Chemist, Alion Science and Technology/ESAT  
Contractor to Region 5 Central Regional Laboratory  
Submitted to CRL on

To:

SF  
Mike Ribordy  
SE 5T

*Richard O.Q. Baltrus*  
*3 June 2004*

Attached are the results for: Gilbert Landfill

CRL data set number: E405001

Samples analyzed for: Mercury

Results are reported for sample designations: E405001-01 to E405001-25

*Sylvia Griffin*

JUN 03 2004

Data Management Coordinator and Date Received

Date Transmitted: JUN 03 2004

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

Received by and Date

Comments:

Attached are the results for: **Gilbert Landfill**

CRL data set number: **E405001**

Samples analyzed for: **Mercury**

Results are reported for sample designations: **E405001-01 to E405001-25**

**Parameter: Mercury**

**Method: 245.5\*DNS (AIG043 dated 06/18/03)**

**Analyst: Richard Baltrus**

**Date: June 1, 2004**

**Data Set: E405001**

**TDF: 5-22-016**

**JOB: 246-0-1476-202-077-001**

**Task Order: 05-1-22**

### **NARRATIVE**

Twenty-five (25) soil samples from Gilbert Landfill (Gilbert, IL) site were collected on April 22 and 28-30, 2004. The samples were received on May 3, 2004. The samples were received at a temperature of 4.4°C.

For a more detailed listing of the sample ID, Laboratory ID, Field Station ID and sample dates, refer to the Work Order pages and /or initial LIMS report where these listings could be found.

The soil samples were initially manually digested as LIMS batch EE41401 on May 13, 2004. All digestion sample tubes were capped during the digestions. Hydroxylamine solution was manually added prior to analysis on May 14 and 17, 2004. An attempt was made to re-digest and re-analyze the samples as LIMS batch EE42401 due to a failed blank spike and a failed duplicate EE41401-DUP2 (E405001-16). None of the re-analysis data are reported due to failed organic check samples in the course of the run.

The laboratory duplicate EE41401-DUP2 (E405001-16) failed the RPD limit. EE41401-DUP2 and all the results and except E405001-02 are flagged "\*" in LIMS. The sample concentrations for the matrix spike samples EE41401-MS1 and -MS2 are greater than  $\pm$  the concentration of the spike added; the matrix spikes are flagged "#" in LIMS and considered invalid. The blank spike EE41401-BS1 is used for spike evaluation and was above the upper recovery limit; therefore, all the results are flagged "K" in LIMS due to a possible high bias. Non-detects results are reported to the reporting limit (RL). The following results between the method detection limit (MDL) and the RL are reported as the instrument value with a "J" flag: E405001-04, -05, -09, -15, -18, -20, -22, -23 and -25. All flagged results are considered estimated.

The following reported values are adjusted for dilution: E405001-02, -08, -10, -12, -13, -16 and -17. Where appropriate the reported values are dilution corrected. All samples were analyzed within the 28 day holding time limit.

Matrix and digestion QC reports and sample results are found as LIMS printouts. A QC summary is in a separate Lotus 1-2-3 report. Details of this analysis can be found in the Alion Science Technology logbook number C31846 pages 15 through 20.

*R. D. Baltrus*  
2 June 2004

000012



**ALION**  
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**Alion Science and Technology ESAT Region 5**

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Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 15:29

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
X102	E405001-01	Soil	Apr-28-04 10:50	May-03-04 10:43
X103	E405001-02	Soil	Apr-28-04 10:55	May-03-04 10:43
X104	E405001-03	Soil	Apr-28-04 11:05	May-03-04 10:43
X105	E405001-04	Soil	Apr-28-04 11:20	May-03-04 10:43
X106	E405001-05	Soil	Apr-28-04 11:35	May-03-04 10:43
X107	E405001-06	Soil	Apr-28-04 12:45	May-03-04 10:43
X108	E405001-07	Soil	Apr-28-04 12:55	May-03-04 10:43
X109	E405001-08	Soil	Apr-28-04 13:15	May-03-04 10:43
X110	E405001-09	Soil	Apr-28-04 13:45	May-03-04 10:43
X111	E405001-10	Soil	Apr-28-04 13:55	May-03-04 10:43
X112	E405001-11	Soil	Apr-28-04 14:15	May-03-04 10:43
X113	E405001-12	Soil	Apr-28-04 14:30	May-03-04 10:43
X114	E405001-13	Soil	Apr-28-04 14:45	May-03-04 10:43
X115	E405001-14	Soil	Apr-28-04 15:30	May-03-04 10:43
X116	E405001-15	Soil	Apr-28-04 16:15	May-03-04 10:43
X117	E405001-16	Soil	Apr-29-04 08:30	May-03-04 10:43
X118	E405001-17	Soil	Apr-29-04 08:45	May-03-04 10:43
X119	E405001-18	Soil	Apr-29-04 08:55	May-03-04 10:43
X120	E405001-19	Soil	Apr-29-04 09:15	May-03-04 10:43
X121	E405001-20	Soil	Apr-29-04 09:30	May-03-04 10:43
X122	E405001-21	Soil	Apr-29-04 09:45	May-03-04 10:43
X123	E405001-22	Soil	Apr-29-04 11:15	May-03-04 10:43
X124	E405001-23	Soil	Apr-29-04 13:15	May-03-04 10:43
X125	E405001-24	Soil	Apr-30-04 07:09	May-03-04 10:43
X126	E405001-25	Soil	Apr-30-04 07:08	May-03-04 10:43

Richard Baltrus, Chemist

5 Jun 2004

000013

Report Name: E405001

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Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 15:29

**Cold Vapor Analyses**  
**Alion - ESAT Contract**

102 (E405001-01) Soil Sampled: Apr-28-04 10:50 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.088	K, *	0.018	0.045	mg/kg dry	1	EE41401	May-13-0	May-14-04

103 (E405001-02) Soil Sampled: Apr-28-04 10:55 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.22	K	0.035	0.088	mg/kg dry	2	EE41401	May-13-0	May-14-04

104 (E405001-03) Soil Sampled: Apr-28-04 11:05 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.063	K, *	0.017	0.042	mg/kg dry	1	EE41401	May-13-0	May-14-04

105 (E405001-04) Soil Sampled: Apr-28-04 11:20 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.029	J, K, *	0.016	0.039	mg/kg dry	1	EE41401	May-13-0	May-14-04

106 (E405001-05) Soil Sampled: Apr-28-04 11:35 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.031	J, K, *	0.016	0.040	mg/kg dry	1	EE41401	May-13-0	May-14-04

113 (E405001-06) Soil Sampled: Apr-28-04 12:45 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.11	K, *	0.013	0.033	mg/kg dry	1	EE41401	May-13-0	May-17-04

114 (E405001-07) Soil Sampled: Apr-28-04 12:55 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.092	K, *	0.019	0.048	mg/kg dry	1	EE41401	May-13-0	May-14-04

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Report Name: E405001

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*Richard A. Baltruš, Chemist*



**ALION**  
SCIENCE AND TECHNOLOGY

**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
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Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 15:29

**Cold Vapor Analyses**  
**Alion - ESAT Contract**

116 (E405001-08) Soil Sampled: Apr-28-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.59	K, *	0.087	0.22	mg/kg dry	5	EE41401	May-13-0	May-17-04

117 (E405001-09) Soil Sampled: Apr-28-04 13:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.038	J, K, *	0.016	0.040	mg/kg dry	1	EE41401	May-13-0	May-14-04

118 (E405001-10) Soil Sampled: Apr-28-04 13:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.22	K, *	0.029	0.072	mg/kg dry	2	EE41401	May-13-0	May-17-04

119 (E405001-11) Soil Sampled: Apr-28-04 14:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.11	K, *	0.017	0.043	mg/kg dry	1	EE41401	May-13-0	May-14-04

120 (E405001-12) Soil Sampled: Apr-28-04 14:30 Received: May-03-04 10:43

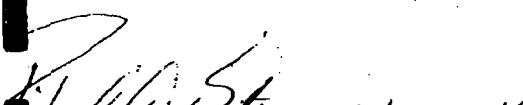
Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.45	K, *	0.071	0.18	mg/kg dry	5	EE41401	May-13-0	May-17-04

121 (E405001-13) Soil Sampled: Apr-28-04 14:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.81	K, *	0.15	0.39	mg/kg dry	10	EE41401	May-13-0	May-17-04

123 (E405001-14) Soil Sampled: Apr-28-04 15:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.15	K, *	0.015	0.038	mg/kg dry	1	EE41401	May-13-0	May-14-04

  
Richard Baltrus, Chemist

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Report Name: E405001

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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 15:29

**Cold Vapor Analyses**  
**Alion - ESAT Contract**

124 (E405001-15) Soil Sampled: Apr-28-04 16:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.028	J, K, *	0.017	0.043	mg/kg dry	1	EE41401	May-13-0	May-14-04

127 (E405001-16) Soil Sampled: Apr-29-04 08:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.17	K, *	0.032	0.079	mg/kg dry	2	EE41401	May-13-0	May-14-04

128 (E405001-17) Soil Sampled: Apr-29-04 08:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.25	K, *	0.032	0.081	mg/kg dry	2	EE41401	May-13-0	May-17-04

129 (E405001-18) Soil Sampled: Apr-29-04 08:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.024	J, K, *	0.015	0.038	mg/kg dry	1	EE41401	May-13-0	May-14-04

131 (E405001-19) Soil Sampled: Apr-29-04 09:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.056	K, *	0.016	0.040	mg/kg dry	1	EE41401	May-13-0	May-14-04

132 (E405001-20) Soil Sampled: Apr-22-04 09:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.032	J, K, *	0.017	0.042	mg/kg dry	1	EE41401	May-13-0	May-14-04

142 (E405001-21) Soil Sampled: Apr-29-04 09:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.10	K, *	0.018	0.045	mg/kg dry	1	EE41401	May-13-0	May-14-04

Richard Baltrus, Chemist

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Report Name: E405001  
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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 15:29

**Cold Vapor Analyses**

**Alion - ESAT Contract**

49 (E405001-22) Soil Sampled: Apr-29-04 11:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.037	J, K, *	0.017	0.043	mg/kg dry	1	EE41401	May-13-0	May-14-04

53 (E405001-23) Soil Sampled: Apr-29-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.040	J, K, *	0.019	0.049	mg/kg dry	1	EE41401	May-13-0	May-14-04

160 (E405001-24) Soil Sampled: Apr-30-04 07:09 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.10	K, *	0.018	0.045	mg/kg dry	1	EE41401	May-13-0	May-14-04

51 (E405001-25) Soil Sampled: Apr-30-04 07:08 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.024	J, K, *	0.015	0.038	mg/kg dry	1	EE41401	May-13-0	May-14-04

Richard Baltrus, Chemist

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Report Name: E405001  
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Project: Gilbert Landfill  
Project Number: {none}  
Project Manager: Howard Pham

Reported:  
Jun-02-04 15:29

**Notes and Definitions**

Spike audit not valid. The sample concentration exceeds twice the concentration of the spike added. No qualification made for this QC audit.

The duplicate analysis precision is not within control limits. The reported value is estimated.

The identification of the analyte is acceptable; the reported value is an estimate.

The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

ND Not Detected

NR Not Reported

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Richard Baltrus, Chemist

Report Name: E405001  
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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 12:28

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DRAFT: X102	E405001-01	Soil	Apr-28-04 10:50	May-03-04 10:43
DRAFT: X103	E405001-02	Soil	Apr-28-04 10:55	May-03-04 10:43
DRAFT: X105	E405001-04	Soil	Apr-28-04 11:20	May-03-04 10:43
DRAFT: X121	E405001-13	Soil	Apr-28-04 14:45	May-03-04 10:43
DRAFT: X123	E405001-14	Soil	Apr-28-04 15:30	May-03-04 10:43
DRAFT: X128	E405001-17	Soil	Apr-29-04 08:45	May-03-04 10:43
DRAFT: X129	E405001-18	Soil	Apr-29-04 08:55	May-03-04 10:43
DRAFT: X142	E405001-21	Soil	Apr-29-04 09:45	May-03-04 10:43
DRAFT: X149	E405001-22	Soil	Apr-29-04 11:15	May-03-04 10:43
DRAFT: X153	E405001-23	Soil	Apr-29-04 13:15	May-03-04 10:43

Preliminary



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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 12:28

**DRAFT: Mercury by Cold Vapor AA, TCLP Extract**

**Alion - ESAT Contract**

AFT: X102 (E405001-01) Soil Sampled: Apr-28-04 10:50 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
cury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

AFT: X103 (E405001-02) Soil Sampled: Apr-28-04 10:55 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
cury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

AFT: X105 (E405001-04) Soil Sampled: Apr-28-04 11:20 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
cury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

**Preliminary**

AFT: X121 (E405001-13) Soil Sampled: Apr-28-04 14:00 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
cury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

AFT: X123 (E405001-14) Soil Sampled: Apr-28-04 15:30 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
cury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

AFT: X128 (E405001-17) Soil Sampled: Apr-29-04 08:45 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
cury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

AFT: X129 (E405001-18) Soil Sampled: Apr-29-04 08:55 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
cury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

AFT: X142 (E405001-21) Soil Sampled: Apr-29-04 09:45 Received: May-03-04 10:43



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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 12:28

**DRAFT: Mercury by Cold Vapor AA, TCLP Extract**

**Alion - ESAT Contract**

DRAFT: X142 (E405001-21) Soil Sampled: Apr-29-04 09:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

DRAFT: X149 (E405001-22) Soil Sampled: Apr-29-04 11:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

DRAFT: X153 (E405001-23) Soil Sampled: Apr-29-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	Jun-02-04	May-28-04

**Preliminary**



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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:49

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DRAFT: X102	E405001-01	Soil	Apr-28-04 10:50	May-03-04 10:43
DRAFT: X103	E405001-02	Soil	Apr-28-04 10:55	May-03-04 10:43
DRAFT: X105	E405001-04	Soil	Apr-28-04 11:20	May-03-04 10:43
DRAFT: X121	E405001-13	Soil	Apr-28-04 14:45	May-03-04 10:43
DRAFT: X123	E405001-14	Soil	Apr-28-04 15:30	May-03-04 10:43
DRAFT: X128	E405001-17	Soil	Apr-29-04 08:45	May-03-04 10:43
DRAFT: X129	E405001-18	Soil	Apr-29-04 08:55	May-03-04 10:43
DRAFT: X142	E405001-21	Soil	Apr-29-04 09:45	May-03-04 10:43
DRAFT: X149	E405001-22	Soil	Apr-29-04 11:15	May-03-04 10:43
DRAFT: X153	E405001-23	Soil	Apr-29-04 13:15	May-03-04 10:43

Preliminary

M. Mattox  
Margie Mattox, Chemist

6-2-04

Report Name: E405001 DRAFT  
Page 1 of 6

**(A)**
**Alion Science and Technology ESAT Region 5**

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 Project: Gilbert Landfill  
 Project Number: {none}  
 Project Manager: Howard Pham

 Reported:  
 Jun-02-04 11:49

**DRAFT: Metals by ICP, TCLP Extract**
**Alion - ESAT Contract**

DRAFT: X102 (E405001-01) Soil Sampled: Apr-28-04 10:50 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
arsenic	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
cromium	489		6.0	20.0	"	"	"	"	"
mium	39.9		3.0	10.0	"	"	"	"	"
romium	U		6.0	20.0	"	"	"	"	"
ead	38300		40.0	200	"	"	"	"	"
ntimony	U		110	400	"	"	"	"	"
mer	U		9.0	40.0	"	"	"	"	"

DRAFT: X103 (E405001-02) Soil Sampled: Apr-28-04 10:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
rsenic	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
ium	214		6.0	20.0	"	"	"	"	"
mium	22.1		3.0	10.0	"	"	"	"	"
romium	16.1		6.0	20.0	"	"	"	"	"
ad	20700		40.0	200	"	"	"	"	"
elenium	U		110	400	"	"	"	"	"
iver	U		9.0	40.0	"	"	"	"	"

DRAFT: X105 (E405001-04) Soil Sampled: Apr-28-04 11:20 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
rsenic	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
arium	604		6.0	20.0	"	"	"	"	"
mium	92.7		3.0	10.0	"	"	"	"	"
romium	20.0		6.0	20.0	"	"	"	"	"
ead	33400		40.0	200	"	"	"	"	"
inium	U		110	400	"	"	"	"	"
mer	U		9.0	40.0	"	"	"	"	"

 M. Mattox  
 Margie Mattox, Chemist

6-2-04

Report Name: E405001 DRAFT

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7 West Jackson Boulevard  
chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-02-04 11:49**DRAFT: Metals by ICP, TCLP Extract****Alion - ESAT Contract**

AFT: X121 (E405001-13) Soil Sampled: Apr-28-04 14:45 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
zinc	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
ium	239		6.0	20.0	-	-	-	-	-
mium	1310		3.0	10.0	-	-	-	-	-
romium	U		6.0	20.0	-	-	-	-	-
id	678000		40.0	200	-	-	-	-	-
enium	U		110	400	-	-	-	-	-
mer	U		9.0	40.0	-	-	-	-	-

AFT: X123 (E405001-14) Soil Sampled: Apr-28-04 15:30 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
zinc	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
ium	269		6.0	20.0	-	-	-	-	-
mium	34.9		3.0	10.0	-	-	-	-	-
romium	U		6.0	20.0	-	-	-	-	-
id	165000		40.0	200	-	-	-	-	-
enium	U		110	400	-	-	-	-	-
mer	U		9.0	40.0	-	-	-	-	-

AFT: X128 (E405001-17) Soil Sampled: Apr-29-04 08:45 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
zinc	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
ium	302		6.0	20.0	-	-	-	-	-
mium	59.3		3.0	10.0	-	-	-	-	-
romium	9.6		6.0	20.0	-	-	-	-	-
id	142000		40.0	200	-	-	-	-	-
enium	U		110	400	-	-	-	-	-
mer	U		9.0	40.0	-	-	-	-	-

**Preliminary***M. Mattox 6-2-04*  
Marge Mattox, ChemistReport Name: E405001 DRAFT  
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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:49

**DRAFT: Metals by ICP, TCLP Extract**

**Alion - ESAT Contract**

RAFT: X129 (E405001-18) Soil Sampled: Apr-29-04 08:55 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Antimony	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
Barium	224		6.0	20.0	-	-	-	-	-
Boron	11.9		3.0	10.0	-	-	-	-	-
Cadmium	36.8		6.0	20.0	-	-	-	-	-
Copper	54.8		40.0	200	-	-	-	-	-
Iron	174		110	400	-	-	-	-	-
Manganese	U		9.0	40.0	-	-	-	-	-

RAFT: X142 (E405001-21) Soil Sampled: Apr-29-04 09:45 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Antimony	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
Barium	611		6.0	20.0	-	-	-	-	-
Boron	18.6		4.0	10.0	-	-	-	-	-
Cadmium	13.1		6.0	20.0	-	-	-	-	-
Copper	7570		40.0	200	-	-	-	-	-
Iron	133		110	400	-	-	-	-	-
Manganese	U		9.0	40.0	-	-	-	-	-

Preliminary

RAFT: X149 (E405001-22) Soil Sampled: Apr-29-04 11:15 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Antimony	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
Barium	585		6.0	20.0	-	-	-	-	-
Boron	26.2		3.0	10.0	-	-	-	-	-
Cadmium	45.4		6.0	20.0	-	-	-	-	-
Copper	180		40.0	200	-	-	-	-	-
Iron	U		110	400	-	-	-	-	-
Manganese	U		9.0	40.0	-	-	-	-	-

M. Mattox 6-2-04  
M. Mattox, Chemist

Report Name: E405001.DRAFT  
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**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605

Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
7 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:49

**DRAFT: Metals by ICP, TCLP Extract****Alion - ESAT Contract**

DRAFT: X153 (E405001-23) Soil Sampled: Apr-29-04 13:15 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Selenium	U		140	500	ug/L	1	EE42402	May-24-0	May-26-04
Chromium	499		6.0	20.0	"	"	"	"	"
Manganese	9.2		3.0	10.0	"	"	"	"	"
Iron	10.7		6.0	20.0	"	"	"	"	"
Lead	51.5		40.0	200	"	"	"	"	"
Cadmium	U		110	400	"	"	"	"	"
Mercury	U		9.0	40.0	"	"	"	"	"

# Preliminary

M. Mattox 6-2-04  
Margie Mattox, Chemist

Report Name: E405001 DRAFT  
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**ALION**  
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7 West Jackson Boulevard  
cago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:49

**Notes and Definitions**

Not Detected

Not Reported

# Preliminary

*M. Mattox* 6-2-04  
Mike Mattox, Chemist

Report Name: E405001 DRAFT  
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**Alion Science and Technology ESAT Region 5**

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17 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DRAFT: X102	E405001-01	Soil	Apr-28-04 10:50	May-03-04 10:43
DRAFT: X103	E405001-02	Soil	Apr-28-04 10:55	May-03-04 10:43
DRAFT: X104	E405001-03	Soil	Apr-28-04 11:05	May-03-04 10:43
DRAFT: X105	E405001-04	Soil	Apr-28-04 11:20	May-03-04 10:43
DRAFT: X106	E405001-05	Soil	Apr-28-04 11:35	May-03-04 10:43
DRAFT: X113	E405001-06	Soil	Apr-28-04 12:45	May-03-04 10:43
DRAFT: X114	E405001-07	Soil	Apr-28-04 12:55	May-03-04 10:43
DRAFT: X116	E405001-08	Soil	Apr-28-04 13:15	May-03-04 10:43
DRAFT: X117	E405001-09	Soil	Apr-28-04 13:45	May-03-04 10:43
DRAFT: X118	E405001-10	Soil	Apr-28-04 13:55	May-03-04 10:43
DRAFT: X119	E405001-11	Soil	Apr-28-04 14:15	May-03-04 10:43
DRAFT: X120	E405001-12	Soil	Apr-28-04 14:30	May-03-04 10:43
DRAFT: X121	E405001-13	Soil	Apr-28-04 14:45	May-03-04 10:43
DRAFT: X123	E405001-14	Soil	Apr-28-04 15:30	May-03-04 10:43
DRAFT: X124	E405001-15	Soil	Apr-28-04 16:15	May-03-04 10:43
DRAFT: X127	E405001-16	Soil	Apr-29-04 08:30	May-03-04 10:43
DRAFT: X128	E405001-17	Soil	Apr-29-04 08:45	May-03-04 10:43
DRAFT: X129	E405001-18	Soil	Apr-29-04 08:55	May-03-04 10:43
DRAFT: X131	E405001-19	Soil	Apr-29-04 09:15	May-03-04 10:43
DRAFT: X132	E405001-20	Soil	Apr-29-04 09:30	May-03-04 10:43
DRAFT: X142	E405001-21	Soil	Apr-29-04 09:45	May-03-04 10:43
DRAFT: X149	E405001-22	Soil	Apr-29-04 11:15	May-03-04 10:43
DRAFT: X153	E405001-23	Soil	Apr-29-04 13:15	May-03-04 10:43
DRAFT: X160	E405001-24	Soil	Apr-30-04 07:09	May-03-04 10:43
DRAFT: X161	E405001-25	Soil	Apr-30-04 07:08	May-03-04 10:43

Preliminary

6-2-04

P.M. Mattox  
Supplemental Chemist  
H. MATTOX

Report Name: E405001-DRAFT

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Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

DRAFT: X102 (E405001-01) Soil Sampled: Apr-28-04 10:50 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
aluminum	9300		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
arium	150		0.24	0.80					
yllium	3.1		0.040	0.10					
uminum	4.4		0.48	1.6					
alcium	6800		6.8	20					
omium	9.7		1.4	5.0					
balt	13		1.2	4.0					
pper	30		0.30	1.0					
	28000		3.6	12					
	6500		16	50					
agnesium	2500		6.0	18					
ganese	670		0.16	0.50					
el	30		6.0	20					
stassium	1000		40	6					
er	U		0.40	1.2					
um	170		6.0	20					
inadium	22		1.4	5.0					
	590		1.4	5.0					

Preliminary

DRAFT: X103 (E405001-02) Soil Sampled: Apr-28-04 10:55 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
uminum	8500		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	530		0.24	0.80					
yllium	2.2		0.040	0.10					
idium	4.0		0.48	1.6					
leium	5200		6.8	20					
inium	29		1.4	5.0					
balt	6.2		1.2	4.0					
pper	440		0.30	1.0					
	63000		3.6	12					
	52000		16	50					
agnesium	1900		6.0	18					
ganese	230		0.16	0.50					

M. Mattox  
John Compton, Chemist  
M. MATTOX

6-2-04

Report Name: E405001 DRAFT

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**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
17 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-02-04 11:48**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

DRAFT: X103 (E405001-02) Soil Sampled: Apr-28-04 10:55 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
ckel	39		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
tassium	1400		20	64					
ver	1.7	0.40	1.2						
dium	290		6.0	20					
niadum	27		1.4	5.0					
nc	550		1.4	5.0					

DRAFT: X104 (E405001-03) Soil Sampled: Apr-28-04 11:05 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
uminum	7200		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	140		0.74	0.90					
rylrium	3.2		0.4	0.5					
dmium	1.0		0.4	1					
lcium	5100		6.8	20					
ronium	15		1.4	5.0					
balt	6.8		1.2	4.0					
pper	170		0.30	1.0					
n	45000		3.6	12					
ad	15000		16	50					
agnesium	2300		6.0	18					
anganese	81		0.16	0.50					
ckel	30		1.6	7.0					
tassium	1700		20	64					
ver	0.66	0.40	1.2						
dium	410		6.0	20					
niadum	27		1.4	5.0					
nc	190		1.4	5.0					

**Preliminary**

M. Mattox 6-2-04  
Stephen Comer, Chemist  
M. MATTOX

Report Name: E405001 DRAFT  
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Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

RAFT: X105 (E405001-04) Soil Sampled: Apr-28-04 11:20 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
tinium	12000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	110		0.24	0.80					
llium	5.7		0.040	0.10					
inium	7.6		0.48	1.6					
licium	48000		6.8	20					
omium	11		1.4	5.0					
alt	11		1.2	4.0					
opper	52		0.30	1.0					
	32000		3.6	12					
	5600		16	50					
agnesium	22000		6.0	18					
ganese	490		0.16	0.50					
el	43		1.6	7.0					
tassium	1200		6.0	6					
ver	1.3		0.40	1.2					
um	540		6.0	20					
odium	27		1.4	5.0					
IC	800		1.4	5.0					

Preliminary

RAFT: X106 (E405001-05) Soil Sampled: Apr-28-04 11:35 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
tinium	11000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	130		0.24	0.80					
llium	1.9		0.040	0.10					
inium	2.5		0.48	1.6					
licium	2900		6.8	20					
omium	15		1.4	5.0					
alt	11		1.2	4.0					
opper	61		0.39	1.0					
	24000		3.6	12					
	750		16	50					
agnesium	2400		6.0	18					
ganese	480		0.16	0.50					

M. Mattox 6-2-04

John Comer, Chemist  
MATTOX

Report Name: E405001 DRAFT

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**Alion Science and Technology ESAT Region 5**

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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

RAFT: X106 (E405001-05) Soil Sampled: Apr-28-04 11:35 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
nickel	21		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
titanium	860		20	64	"	"	"	"	"
silver	0.60		0.40	1.2	"	"	"	"	"
cadmium	36		6.0	20	"	"	"	"	"
manganese	25		1.4	5.0	"	"	"	"	"
zinc	520		1.4	5.0	"	"	"	"	"

RAFT: X113 (E405001-06) Soil Sampled: Apr-28-04 12:45 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
chromium	12000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
tin	460		0.24	0.80	"	"	"	"	"
yttrium	5.5		0.4	0.0	"	"	"	"	"
cadmium	2.8		0.4	1.6	"	"	"	"	"
calcium	4700		6.8	20	"	"	"	"	"
iron	24		1.4	5.0	"	"	"	"	"
zinc	11		1.2	4.0	"	"	"	"	"
aluminum	2000		0.60	2.0	"	2	"	"	"
tin	48000		3.6	12	"	1	"	"	"
zinc	120000		32	100	"	2	"	"	"
strontium	820		6.0	18	"	1	"	"	"
manganese	370		0.16	0.50	"	"	"	"	"
nickel	39		1.6	7.0	"	"	"	"	"
titanium	1100		20	64	"	"	"	"	"
silver	3.0		0.40	1.2	"	"	"	"	"
cadmium	500		6.0	20	"	"	"	"	"
manganese	28		1.4	5.0	"	"	"	"	"
zinc	460		1.4	5.0	"	"	"	"	"

Preliminary

M. Maittox 6-2-04

Stephen Maittox, Chemist  
M. MAITTOX

Report Name: E405001 DRAFT

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Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

DRAFT: X114 (E405001-07) Soil Sampled: Apr-28-04 12:55 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Uranium	10000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Strontium	160		0.24	0.80	"	"	"	"	"
Sodium	2.4		0.040	0.10	"	"	"	"	"
Lithium	2.0		0.48	1.6	"	"	"	"	"
Calcium	8200		6.8	20	"	"	"	"	"
Potassium	12		1.4	5.0	"	"	"	"	"
Magnesium	7.9		1.2	4.0	"	"	"	"	"
Copper	230		0.30	1.0	"	"	"	"	"
Zinc	21000		3.6	12	"	"	"	"	"
Lead	3200		16	50	"	"	"	"	"
Manganese	3000		6.0	18	"	"	"	"	"
Iron	440		0.16	0.50	"	"	"	"	"
Chromium	22		6.0	70	"	"	"	"	"
Strontium	1300		0.40	6	"	"	"	"	"
Mercury	0.84		0.40	1.2	"	"	"	"	"
Barium	250		6.0	20	"	"	"	"	"
Nickel	30		1.4	5.0	"	"	"	"	"
Vanadium	350		1.4	5.0	"	"	"	"	"
PCP									

Preliminary

DRAFT: X116 (E405001-08) Soil Sampled: Apr-28-04 13:15 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Uranium	11000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Strontium	590		0.24	0.80	"	"	"	"	"
Sodium	2.1		0.040	0.10	"	"	"	"	"
Lithium	6.8		0.48	1.6	"	"	"	"	"
Calcium	16000		6.8	20	"	"	"	"	"
Potassium	28		1.4	5.0	"	"	"	"	"
Magnesium	8.1		1.2	4.0	"	"	"	"	"
Copper	1300		0.60	2.0	"	2	"	"	"
Zinc	49000		3.6	12	"	1	"	"	"
Lead	43000		16	50	"	"	"	"	"
Manganese	9200		6.0	18	"	"	"	"	"
Iron	370		0.16	0.50	"	"	"	"	"
PCP									

M. Waller 6-2-04

Robert Waller, Chemist

MATTIX

Report Name: E405001 DRAFT

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17 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

RAFT: X116 (E405001-08) Soil Sampled: Apr-28-04 13:15 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
nickel	75		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
tassium	1300		20	64					
lver	3.2		0.40	1.2					
dium	260		6.0	20					
uadium	28		1.4	5.0					
nc	2500		2.8	10		2			

RAFT: X117 (E405001-09) Soil Sampled: Apr-28-04 13:45 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
umium	13000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	120		0.24	0.80					
xyllium	11		0.04	0.10					
idmium	8.7		0.44	1.6					
clium	15000		6.8	20					
romium	11		1.4	5.0					
balt	17		1.2	4.0					
pper	140		0.30	1.0					
on	51000		3.6	12					
ad	9600		16	50					
agnesium	2500		6.0	18					
anganese	320		0.16	0.50					
ckel	71		1.6	7.0					
tassium	1400		20	64					
lver	0.89		0.40	1.2					
dium	550		6.0	20					
uadium	40		1.4	5.0					
nc	890		1.4	5.0					

Preliminary

M. Mattox 6-2-04  
Stephen Connet, Chemist  
M. MATTOX

Report Name: E405001 DRAFT  
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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

RAFT: X118 (E405001-10) Soil Sampled: Apr-28-04 13:55 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
tinium	5800		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	200		0.24	0.80		*	*	*	*
llium	2.2		0.040	0.10		*	*	*	*
inium	3.0		0.48	1.6		*	*	*	*
lcius	3300		6.8	20		*	*	*	*
omium	18		1.4	5.0		*	*	*	*
alt	6.6		1.2	4.0		*	*	*	*
pper	400		0.30	1.0		*	*	*	*
	51000		3.6	12		*	*	*	*
	63000		16	50		*	*	*	*
ignesium	980		6.0	18		*	*	*	*
ganese	116		0.16	0.50		*	*	*	*
el	41		6.8	70		*	*	*	*
tassium	1900		6.0	20		*	*	*	*
urium	1.3		0.40	1.2		*	*	*	*
um	550		6.0	20		*	*	*	*
nadium	27		1.4	5.0		*	*	*	*
	380		1.4	5.0		*	*	*	*

Preliminary

RAFT: X119 (E405001-11) Soil Sampled: Apr-28-04 14:15 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
tinium	2900		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	160		0.24	0.80		*	*	*	*
llium	0.42		0.040	0.10		*	*	*	*
inium	0.57		0.48	1.6		*	*	*	*
inium	12000		6.8	20		*	*	*	*
omium	12		1.4	5.0		*	*	*	*
alt	2.9		1.2	4.0		*	*	*	*
pper	.53		0.30	1.0		*	*	*	*
	55000		3.6	12		*	*	*	*
	55000		16	50		*	*	*	*
ignesium	460		6.0	18		*	*	*	*
ganese	56		0.16	0.50		*	*	*	*

M. Mattox 6-2-04  
John Connel, Chemist  
MATTOX

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**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
7 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-02-04 11:48**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

DRAFT: X119 (E405001-11) Soil Sampled: Apr-28-04 14:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
nickel	23		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
tassium	2000		20	64	-	-	-	-	-
mer	1.1		0.40	1.2	-	-	-	-	-
dium	350		6.0	20	-	-	-	-	-
niadium	14		1.4	5.0	-	-	-	-	-
nc	100		1.4	5.0	-	-	-	-	-

DRAFT: X120 (E405001-12) Soil Sampled: Apr-28-04 14:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
umium	7000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	00		0.74	0.98	-	-	-	-	-
ryllium	2.0		0.40	0.40	-	-	-	-	-
dmium	5.4		0.40	1.6	-	-	-	-	-
leium	9100		6.8	20	-	-	-	-	-
ronium	10		1.4	5.0	-	-	-	-	-
balt	6.8		1.2	4.0	-	-	-	-	-
pper	230		0.30	1.0	-	-	-	-	-
on	19000		3.6	12	-	-	-	-	-
ad	5600		16	50	-	-	-	-	-
agnesium	3500		6.0	18	-	-	-	-	-
anganese	210		0.16	0.50	-	-	-	-	-
ckel	25		1.6	7.0	-	-	-	-	-
tassium	870		20	64	-	-	-	-	-
ver	0.70		0.40	1.2	-	-	-	-	-
dium	93		6.0	20	-	-	-	-	-
niadium	16		1.4	5.0	-	-	-	-	-
nc	280		1.4	5.0	-	-	-	-	-

**Preliminary**

M. Mattos 6-2-04  
Stephen Connet, Chemist  
M. MATTOS

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**ALION**  
SCIENCE AND TECHNOLOGY

**Alion Science and Technology ESAT Region 5**

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Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

RAFT: X121 (E405001-13) Soil Sampled: Apr-28-04 14:45 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
aluminum	15000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
arium	1000		0.24	0.80	"	"	"	"	"
yllium	7.5		0.040	0.10	"	"	"	"	"
odium	69		0.48	1.6	"	"	"	"	"
alcium	21000		6.8	20	"	"	"	"	"
omium	43		1.4	5.0	"	"	"	"	"
balt	17		1.2	4.0	"	"	"	"	"
upper	900		0.30	1.0	"	"	"	"	"
ad	100000		3.6	12	"	"	"	"	"
nd	120000		32	100	"	2	"	"	"
agnesium	6900		6.0	18	"	"	"	"	"
ganese	500		0.16	0.50	"	"	"	"	"
tel	250		6	70	"	"	"	"	"
tassium	1100		0	6	"	"	"	"	"
er	4.1		0.40	1.2	"	"	"	"	"
um	510		6.0	20	"	"	"	"	"
inadium	26		1.4	5.0	"	"	"	"	"
	13000		14	50	"	10	"	"	"

Preliminary

RAFT: X123 (E405001-14) Soil Sampled: Apr-28-04 15:30 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
uminum	1600		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	56		0.24	0.80	"	"	"	"	"
yllium	0.81		0.040	0.10	"	"	"	"	"
odium	2.0		0.48	1.6	"	"	"	"	"
ium	2300		6.8	20	"	"	"	"	"
omium	5.1		1.4	5.0	"	"	"	"	"
balt	3.8		1.2	4.0	"	"	"	"	"
upper	82		0.30	1.0	"	"	"	"	"
ad	13000		3.6	12	"	"	"	"	"
nd	7500		16	50	"	"	"	"	"
agnesium	900		6.0	18	"	"	"	"	"
ganese	87		0.16	0.50	"	"	"	"	"

M. Mattos  
phen Conner, Chemist

M. MATTOS

6-2-04

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**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307uperfund, US EPA Region 5  
7 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-02-04 11:48**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

AFT: X123 (E405001-14) Soil Sampled: Apr-28-04 15:30 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
kel	14		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
cassium	410		20	64	"	"	"	"	"
er	0.49		0.40	1.2	"	"	"	"	"
lum	81		6.0	20	"	"	"	"	"
nadium	5.0		1.4	5.0	"	"	"	"	"
ic	200		1.4	5.0	"	"	"	"	"

AFT: X124 (E405001-15) Soil Sampled: Apr-28-04 16:15 Received: May-03-04 10:43

alyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
minium	12000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
ium	72		0.24	0.40	"	"	"	"	"
yllium	9.1		0.04	0.10	"	"	"	"	"
dmium	4.6		1.4	1.5	"	"	"	"	"
lcium	9500		6.8	20	"	"	"	"	"
romium	19		1.4	5.0	"	"	"	"	"
balt	27		1.2	4.0	"	"	"	"	"
pper	800		0.30	1.0	"	"	"	"	"
n	100000		3.6	12	"	"	"	"	"
id	400		16	50	"	"	"	"	"
gnesium	4300		6.0	18	"	"	"	"	"
nganese	140		0.16	0.50	"	"	"	"	"
kel	120		1.6	7.0	"	"	"	"	"
cassium	950		20	64	"	"	"	"	"
er	U		0.40	1.2	"	"	"	"	"
lum	260		6.0	20	"	"	"	"	"
nadium	38		1.4	5.0	"	"	"	"	"
ic	670		1.4	5.0	"	"	"	"	"

**Preliminary**RJ Malta  
Stephen Comer, Chemist

6-2-04

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perfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**

**Alion - ESAT Contract**

DRAFT: X127 (E405001-16) Soil Sampled: Apr-29-04 08:30 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
tinum	2800		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	78		0.24	0.80	"	"	"	"	"
llium	1.1		0.040	0.10	"	"	"	"	"
inium	5.0		0.48	1.6	"	"	"	"	"
cium	12000		6.8	20	"	"	"	"	"
omium	9.6		1.4	5.0	"	"	"	"	"
alt	8.0		1.2	4.0	"	"	"	"	"
pper	130		0.30	1.0	"	"	"	"	"
	27000		3.6	12	"	"	"	"	"
	27000		16	50	"	"	"	"	"
ignesium	6100		6.0	18	"	"	"	"	"
anganese	210		0.16	0.50	"	"	"	"	"
el	32		6.0	70	"	"	"	"	"
tassium	570		0.0	6	"	"	"	"	"
ver	0.93		0.40	1.2	"	"	"	"	"
am	200		6.0	20	"	"	"	"	"
nadium	11		1.4	5.0	"	"	"	"	"
ic	310		1.4	5.0	"	"	"	"	"

Preliminary

AFT: 28 (E405001-17) Soil Sampled: Apr-29-04 08:45 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
tinum	5500		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	110		0.24	0.80	"	"	"	"	"
llium	1.0		0.040	0.10	"	"	"	"	"
inium	3.1		0.48	1.6	"	"	"	"	"
cium	24000		6.8	20	"	"	"	"	"
omium	9.5		1.4	5.0	"	"	"	"	"
alt	5.8		1.2	4.0	"	"	"	"	"
pper	190		0.30	1.0	"	"	"	"	"
	27000		3.6	12	"	"	"	"	"
	27000		16	50	"	"	"	"	"
ignesium	9100		6.0	18	"	"	"	"	"
anganese	240		0.16	0.50	"	"	"	"	"

M. Mattox

Nell Connel, Chemist

M. MATTOX

6-2-04

Report Name: E405001 DRAFT

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**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
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17 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-02-04 11:48**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

RAFT: X128 (E405001-17) Soil Sampled: Apr-29-04 08:45 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
ckel	21		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
tassium	900		20	64					
ver	1.1		0.40	1.2					
dium	240		6.0	20					
nadium	18		1.4	5.0					
nc	270		1.4	5.0					

RAFT: X129 (E405001-18) Soil Sampled: Apr-29-04 08:55 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
uminum	7200		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	49		0.14	0.80					
ryllium	4.9		0.14	0.80					
dmium	7.2		0.40	1.2					
lcium	86000		6.8	20					
romium	9.0		1.4	5.0					
balt	9.0		1.2	4.0					
pper	41		0.30	1.0					
in	35000		3.6	12					
ad	900		16	50					
ignesium	26000		6.0	18					
unganese	360		0.16	0.50					
ckel	38		1.6	7.0					
tassium	1100		20	64					
ver	1.1		0.40	1.2					
dium	388		6.0	20					
nadium	25		1.4	5.0					
ic	1300		1.4	5.0					

**Preliminary**

6-2-04

Report Name: E405001 DRAFT

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Stephen Comer, Chemist  
M. MATTOX



**ALION**  
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**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
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Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

RAFT: X131 (E405001-19) Soil Sampled: Apr-29-04 09:15 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Chromium	5800		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Manganese	91		0.24	0.80	-	-	-	-	-
Chromium	0.50		0.040	0.10	-	-	-	-	-
Chromium	4.9		0.48	1.6	-	-	-	-	-
Chromium	66000		6.8	20	-	-	-	-	-
Chromium	12		1.4	5.0	-	-	-	-	-
Salt	6.2		1.2	4.0	-	-	-	-	-
Chromium	280		0.30	1.0	-	-	-	-	-
Chromium	21000		3.6	12	-	-	-	-	-
Chromium	47000		16	50	-	-	-	-	-
Chromium	28000		6.0	18	-	-	-	-	-
Manganese	440		0.16	0.50	-	-	-	-	-
Chromium	27		0.40	7.0	-	-	-	-	-
Chromium	1400		0.40	6	-	-	-	-	-
Chromium	2.9		0.40	1.2	-	-	-	-	-
Chromium	340		6.0	20	-	-	-	-	-
Chromium	13		1.4	5.0	-	-	-	-	-
Chromium	330		1.4	5.0	-	-	-	-	-

Preliminary

RAFT: X132 (E405001-20) Soil Sampled: Apr-22-04 09:30 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Chromium	10000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
Chromium	120		0.24	0.80	-	-	-	-	-
Chromium	4.1		0.040	0.10	-	-	-	-	-
Chromium	2.9		0.48	1.6	-	-	-	-	-
Chromium	23000		6.8	20	-	-	-	-	-
Chromium	8.3		1.4	5.0	-	-	-	-	-
Salt	15		1.2	4.0	-	-	-	-	-
Chromium	80		0.30	1.0	-	-	-	-	-
Chromium	38000		3.6	12	-	-	-	-	-
Chromium	1000		16	50	-	-	-	-	-
Chromium	8300		6.0	18	-	-	-	-	-
Manganese	460		0.16	0.50	-	-	-	-	-

M. Mattos  
John Mattos, Chemist  
MATTOS

6-2-04

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77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

RAFT: X132 (E405001-20) Soil Sampled: Apr-22-04 09:30 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
ckel	46		1.6	7.0	mg/kg	1	EE40501	May-06-0	May-28-04
itassium	780		20	64					
lver	0.80		0.40	1.2					
dium	250		6.0	20					
tinadium	23		1.4	5.0					
nc	430		1.4	5.0					

RAFT: X142 (E405001-21) Soil Sampled: Apr-29-04 09:45 Received: May-03-04 10:43

analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
uminum	7700		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	340		0.24	0.80					
ryllium	0.61		0.06	0.20					
idium	1.7		0.44	1.5					
lclium	37000		6.8	20					
romium	20		1.4	5.0					
balt	7.0		1.2	4.0					
pper	550		0.30	1.0					
on	22000		3.6	12					
ad	5400		16	50					
agnesium	15000		6.0	18					
anganese	650		0.16	0.50					
ckel	22		1.6	7.0					
itassium	1500		20	64					
lver	1.2		0.40	1.2					
dium	190		6.0	20					
tinadium	25		1.4	5.0					
nc	830		1.4	5.0					

Preliminary

6-2-04

Stephen Conner, Chemist  
M. M. 11770X

Report Name: E405001 DRAFT  
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**ALION**  
SCIENCE AND TECHNOLOGY

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Superfund, US EPA Region 5

77 West Jackson Boulevard

Chicago IL, 60604

Project: Gilbert Landfill

Project Number: [none]

Project Manager: Howard Pham

Reported:

Jun-02-04 11:48

**DRAFT: Metals by ICP**

**Alion - ESAT Contract**

RAFT: X149 (E405001-22) Soil Sampled: Apr-29-04 11:15 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
lumium	11000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
am	140		0.24	0.80		-	-	-	-
yllium	8.6		0.040	0.10		-	-	-	-
dmium	6.6		0.48	1.6		-	-	-	-
rium	44000		6.8	20		-	-	-	-
romium	9.9		1.4	5.0		-	-	-	-
balt	19		1.2	4.0		-	-	-	-
per	68		0.30	1.0		-	-	-	-
ad	58000		3.6	12		-	-	-	-
cesium	620		16	50		-	-	-	-
ganese	18000		6.0	18		-	-	-	-
ckel	460		0.16	0.50		-	-	-	-
tassium	68		1.6	7.0		-	-	-	-
ur	1600		6.8	20		-	-	-	-
num	1.2		0.40	1.2		-	-	-	-
nadium	450		6.0	20		-	-	-	-
radium	27		1.4	5.0		-	-	-	-
	1000		1.4	5.0		-	-	-	-

Preliminary

RAFT: X153 (E405001-23) Soil Sampled: Apr-29-04 13:15 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
lumium	12000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
am	120		0.24	0.80		-	-	-	-
yllium	0.66		0.040	0.10		-	-	-	-
dmium	U		0.48	1.6		-	-	-	-
rium	58000		6.8	20		-	-	-	-
romium	17		1.4	5.0		-	-	-	-
balt	10		1.2	4.0		-	-	-	-
per	30		0.30	1.0		-	-	-	-
ad	33000		3.6	12		-	-	-	-
esium	360		16	50		-	-	-	-
ganese	4100		6.0	18		-	-	-	-
	240		0.16	0.50		-	-	-	-

M. Mattos 6-2-04  
John Connel, Chemist  
n.mattos

Report Name: E405001 DRAFT

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**ALION**  
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Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

RAFT: X153 (E405001-23) Soil Sampled: Apr-29-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
nickel	23		1.6	7.0	mg/kg	1	E40501	May-06-0	May-28-04
potassium	1000		20	64					
silver	0.70		0.40	1.2					
sodium	65		6.0	20					
anadium	29		1.4	5.0					
tin	67		1.4	5.0					

RAFT: X160 (E405001-24) Soil Sampled: Apr-30-04 07:09 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
manganese	7100		6.0	20	mg/kg	1	E40501	May-06-0	May-28-04
arium	510		0.24	0.80					
eryllium	0.57		0.04	0.10					
admium	1.7		0.4	1.5					
alcium	38000		6.8	20					
bromium	21		1.4	5.0					
obalt	6.9		1.2	4.0					
opper	260		0.30	1.0					
on	31000		3.6	12					
ead	6200		16	50					
agnesium	12000		6.0	18					
anganese	510		0.16	0.50					
ickel	26		1.6	7.0					
otassium	1200		20	64					
ilver	1.3		0.40	1.2					
odium	290		6.0	20					
anadium	21		1.4	5.0					
tin	1100		1.4	5.0					

Preliminary

6-2-04

M. Mattie  
Stephen Comer, Chemist  
M. MATTIE X

Report Name: E405001 DRAFT

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**A**

**ALION**  
SCIENCE AND TECHNOLOGY

**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**DRAFT: Metals by ICP**  
**Alion - ESAT Contract**

DRAFT: X161 (E405001-25) Soil Sampled: Apr-30-04 07:08 Received: May-03-04 10:43

Element	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Lumium	12000		6.0	20	mg/kg	1	EE40501	May-06-0	May-28-04
rium	75		0.24	0.80					
yllium	11		0.040	0.10					
admium	4.7		0.48	1.6					
ecies	18000		6.8	20					
omium	17		1.4	5.0					
obalt	21		1.2	4.0					
opper	780		0.30	1.0					
rad	83000		3.6	12					
agnesium	680		16	50					
eganese	8000		6.0	18					
caei	190		0.16	0.50					
tassium	83		0.6	7.0					
er	1100		0	6					
um	0.57		0.40	1.2					
inadium	300		6.0	20					
	32		1.4	5.0					
	770		1.4	5.0					

Preliminary

M. Mattes 6-2-04  
John Conner, Chemist  
M. MATTES

Report Name: E405001 DRAFT

Page 18 of 19



**ALION**  
SCIENCE AND TECHNOLOGY

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-02-04 11:48

**Notes and Definitions**

U Not Detected  
NR Not Reported

**Preliminary**

*PM/lnotex 6-2-04*  
Stephen Comer, Chemist  
M MATTOX

Report Name: E405001 DRAFT  
Page 19 of 19



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5 CENTRAL REGIONAL LABORATORY  
536 SOUTH CLARK STREET  
CHICAGO, ILLINOIS 60605

Date: JUN 07 2004

Subject: Review of Region 5 Data for Gilbert Landfill (Gilbert, IL)

From: Richard Baltrus, Chemist, Alion Science and Technology/ESAT  
Contractor to Region 5 Central Regional Laboratory  
Submitted to CRL on

To:

*Richard R. Baltrus*  
Mike Rebardy  
SE-5J

7 June 2004

Attached are the results for: Gilbert Landfill

CRL data set number: E405001

Samples analyzed for: Mercury, TCLP extracts

Results are reported for sample designations: E405001-01,-02,-04,-13,-14, -17,-18 and -21 to-23

Sylvia Griffin

JUN 07 2004

---

Data Management Coordinator and Date Received

Date Transmitted: JUN 07 2004

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

---

Received by and Date

Comments:

Attached are the results for: **Gilbert Landfill**

CRL data set number: **E405001**

Samples analyzed for: **Mercury, TCLP extracts**

Results are reported for sample designations: **E405001-01,-02,-04,-13,-14, -17,-18 and -21 to -23**

**Parameter: Mercury**

**Method: 245.2\*DNS (AIG044 dated 02/20/04)**

**Analyst: Richard Baltrus**

**Date: June 1, 2004**

**Data Set: E405001**

**TDF: 5-22-016**

**JOB: 246-0-1476-202-077-001**

**Task Order: 05-1-22**

**NARRATIVE**

Ten (10) soil samples from Gilbert Landfill (Gilbert, IL) site were collected on April 28 and 29, 2004. The samples were received on May 3, 2004. The samples were received at a temperature of 4.4°C.

For a more detailed listing of the sample ID, laboratory ID, field station ID and sample dates, refer to the work order pages and /or initial LIMS report where these listings could be found.

The soil samples were TCLP extracted on May 4, 2004 according to CRL SOP # GEN019 (method 1311) and analyzed as water samples. The TCLP extracted samples were manually digested on May 27, 2004. All digestion sample tubes were capped during the digestions. Hydroxylamine solution was manually added prior to analysis on May 28, 2004 as LIMS batch EE42701.

Because the reported QC values are less than 5 $\times$  the MDL, the duplicate difference criteria are used for control purposes, the duplicate EE42701-DUP1 is flagged "<5x". All the QC data were within the limits; therefore, the results are acceptable. All samples were analyzed within the 28 day holding time limit.

Matrix and digestion QC reports and sample results are found as LIMS printouts. A QC summary is in a separate Lotus 1-2-3 report. Details of this analysis can be found in the Alion Science Technology logbook number C31846 pages 21 and 22.

*Richard Q. A. Baltrus  
3 June 2004*

000012



Superfund, US-EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

**Alion Science and Technology ESAT Region 5**  
**536 South Clark Street, Suite 734; Chicago, IL 60605**  
**Telephone (312) 353-8302 Facsimile (312) 353-8307**

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-03-04 13:05

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
X102	E405001-01	Soil	Apr-28-04 10:50	May-03-04 10:43
X103	E405001-02	Soil	Apr-28-04 10:55	May-03-04 10:43
X105	E405001-04	Soil	Apr-28-04 11:20	May-03-04 10:43
X121	E405001-13	Soil	Apr-28-04 14:45	May-03-04 10:43
X123	E405001-14	Soil	Apr-28-04 15:30	May-03-04 10:43
X128	E405001-17	Soil	Apr-29-04 08:45	May-03-04 10:43
X129	E405001-18	Soil	Apr-29-04 08:55	May-03-04 10:43
X142	E405001-21	Soil	Apr-29-04 09:45	May-03-04 10:43
X149	E405001-22	Soil	Apr-29-04 11:15	May-03-04 10:43
X153	E405001-23	Soil	Apr-29-04 13:15	May-03-04 10:43

  
Richard A. Baltrus, Chemist  
3 June 2004

000013  
Report Name: E405001  
Page 1 of 4

**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-03-04 13:05**Mercury by Cold Vapor AA, TCLP Extract****Alion - ESAT Contract**

X102 (E405001-01) Soil Sampled: Apr-28-04 10:50 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

X103 (E405001-02) Soil Sampled: Apr-28-04 10:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

X105 (E405001-04) Soil Sampled: Apr-28-04 11:20 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

X121 (E405001-13) Soil Sampled: Apr-28-04 14:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

X123 (E405001-14) Soil Sampled: Apr-28-04 15:30 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

X128 (E405001-17) Soil Sampled: Apr-29-04 08:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

X129 (E405001-18) Soil Sampled: Apr-29-04 08:55 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

X142 (E405001-21) Soil Sampled: Apr-29-04 09:45 Received: May-03-04 10:43

000014

  
Richard Baltrus, Chemist

Report Name: E405001

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**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-03-04 13:05

**Mercury by Cold Vapor AA, TCLP Extract****Alion - ESAT Contract**

X142 (E405001-21) Soil Sampled: Apr-29-04 09:45 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

X149 (E405001-22) Soil Sampled: Apr-29-04 11:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

X153 (E405001-23) Soil Sampled: Apr-29-04 13:15 Received: May-03-04 10:43

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.1	0.5	ug/L	1	EE42701	May-27-0	May-28-04

*Richard G. Baltruš*  
Richard G. Baltruš, Chemist

3 June 2004

000015

Report Name: E405001

Page 3 of 4

(A)



**Alion Science and Technology ESAT Region 5**

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Superfund, US-EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

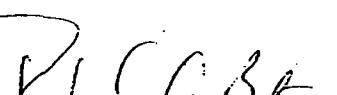
Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-03-04 13:05

**Notes and Definitions**

- |     |   |
|-----|---|
| <5X | One or both concentration values for the duplicate analysis audit were less than 5 times the MDL value AND the difference between the two values was less than the MDL value. The duplicate audit is acceptable. No qualification made for this QC audit. |
| U   | Not Detected  |
| NR  | Not Reported  |

000016

  
Richard Baltrus, Chemist  
3 June 2004

Report Name: E405001

Page 4 of 4



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: **JUL 06 2004**

Subject: **Review of Region 5 Data for Gilbert Landfill**

From: **Stephen Connet, Chemist, Alion Science & Technology / ESAT**  
Contractor to Region 5 Central Regional Laboratory  
Submitted to CRL on **7-2-04** *[Signature]*

To:

Attached are the results for: **Gilbert Landfill**

CRL data set number: **E406001**

Samples analyzed for: **ICP Metals including Cd, Pb (soil)**

Results are reported for sample designations: **E406001**

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COMPTROLLER BRANCH  
2004 JUL - 7 PM 2:52

ENVIRONMENTAL  
PROTECTION AGENCY  
REGION V



JUL 06 2004

Data Management Coordinator and Date Received

Date Transmitted: JUL 06 2004

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

/ /

Received by and Date

Comments:

Attached are the results for: Gilbert Landfill

CRL data set number: E406001

Samples analyzed for: ICP Metals including Cd, Pb (soil)

Results are reported for sample designations: E406001

**Method: 200.7 (ICP Metals)**

**Site: Gilbert Landfill**

**Date: June 24, 2004**

**Prepared by: Stephen Connet**

**TDF: 5-22-025**

**Alion Job #: 246-0-1476-202-077-002**

**Task Order #: 05-1-22**

**Data Set: E406001**

### **NARRATIVE**

Nine (9) soil samples from the Gilbert Landfill site were collected on June 3, 2004 and received at CRL at a temperature of 11.6 °C on June 4, 2004. The samples were submitted to ESAT for analysis of ICP metals including cadmium and lead. The sample point identifications are listed on the first page of the LIMS report.

The samples were dried and ground prior to being digested following standard CRL 200.2 hot block digestion protocols (CRL SOP METALS025) on June 15, 2004 (digestion batch EF41502). Analysis was performed on June 23, 2004 according to CRL SOP METALS004. Two analytical runs were necessary due to a power fluctuation late in the first run which caused the plasma to extinguish.

#### **Analysis Run 062304 Soil**

Due to instrument problems, MDLs were reevaluated in August, 2003. Some of the MDL results did not meet the requirements specified by the EPA. An additional run was performed in September, 2003. Details of this analysis can be found in Alion Logbook C31847. The MDLs will be reevaluated at a future date due to changes made to the ICP.

29 to 30 analyte lines out of a possible 80 lines available were chosen by a plan agreed upon by Dr. J. V. Morris. These are used for routine reporting of analyte values that appear in the QA summary reports.

The following analytes will be addressed in this case narrative:

Al, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn

The following lists the case pertinent out-of-control QC audit check results based on default QA/QC (traditional) limits:

Blanks:	EF41502-BLK1:	Al 308	-68.02 ug/L
		Ba 455	-1.47 ug/L
		Cu 324	-11.30 ug/L

(Run 1)	Instr blk1:	Al 308	-32.21 ug/L
		Cu 324	-18.56 ug/L

7/2/04  
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	Instr blk2:	Al 308	-42.49 ug/L	
		Cu 324	-19.35 ug/L	
(Run 2)	Instr blk1:	Al 308	-33.77 ug/L	
		Cu 324	-3.69 ug/L	
		Na 589	37.28 ug/L	
	Instr blk2:	Al 308	-43.32 ug/L	
		Cu 324	-3.98 ug/L	
LCM1:	(Run 1)	(2)	Fe 273	10.52%*
	(Run 2)	(1)	Fe 273	11.97%*

\* Alternate line used for reporting at this level.

**RL Check Soln:** Presently no "control" actions are associated with the observed RL analyte values actually determined during the analysis run. RL check solution values currently are being analyzed for purposes of generating a benchmark set of values which can be used to monitor the appropriateness of any given RL level of analyte concentration. Values are subject to change pending further repairs on the instrument.

### **Control Sample:**

**EF41502-SRM1:** Ag 328 145.55% (> upper control limit)  
Fe 273 120.56% (> upper control limit)

### Duplicate:

**EF41502-DUP1 (E406001-01): Ag 328, Cd 214 <5X**

< 5X: Sample and/or duplicate < 5X MDL; duplicate difference acceptable.

### **Matrix Spike:**

EF41502-MS2 (E406001-01): Pb 220 #  
(Hi spike)

# Sample concentration is greater than 2X the spike added; matrix spike invalid.

### **Sample element qualifications:**

Control limits will be set according to ESAT control charts in the future. At present, ESAT

AT 9:21 AM  
600008

control limits are either outside those designated in METALS004 or insufficient data points are present to develop ESAT limits; therefore, all control limits are set according to EPA limits.

**Soil results:**

For Ag, the result for the control sample EF41502-SRM1 was greater than the upper limit. All Ag results and control sample EF41502-SRM1 are flagged "K" in LIMS due to a possible high bias. Also, the sample results for E406001-01 and duplicate EF41502-DUP1 were less than 5X the detection limit. Duplicate difference is used for control purposes and is acceptable. The Ag result for EF41502-DUP1 is flagged "<5X" in LIMS. Sample results for E406001-03 through -09 are greater than the MDL but less than the RL; Ag for those samples is flagged "J" in LIMS.

For Al308, all instrument blanks and digestion blank EF41502-BLK1 showed negative results whose absolute value was above the MDL; however, the results were too low to affect sample results. All Al results are reported from the 308 line.

For Ba, the digestion blank EF41502-BLK1 showed a negative result whose absolute value was above the MDL; however, the result was too low to affect sample results. Also, the result for EF41502-MS2 was greater than 110% of the calibration; a 2X dilution was performed and results reported from that dilution.

For Cd, the sample results for E406001-01 and duplicate EF41502-DUP1 were less than 5X the detection limit. Duplicate difference is used for control purposes and is acceptable. The Cd result for EF41502-DUP1 is flagged "<5X" in LIMS. Sample results for E406001-04 and -05 are greater than the MDL but less than the RL; Cd for those samples is flagged "J" in LIMS.

For Ca, the sample concentration for the control sample EF41502-SRM1 was such that dilution was required. Reported results reflect the 10X dilution.

For Cu, instrument blanks and digestion blank EF41502-BLK1 showed negative results whose absolute value was above the MDL; however, the results were too low to affect sample results. Also, the matrix spike result was less than the lower limit. All Cu results and EF41502-MS1 are flagged "L" in LIMS due to the possible low bias. Finally, the sample concentration for the control sample EF41502-SRM1 was such that dilution was required. Reported results reflect the 10X dilution.

All Fe results are reported from the Fe 273 line due to the levels being reported. The Fe results for 1 LCM1 from each analytical run was greater than the upper limit; however, the sample result is at such a level that the Hi AQC is used for control purposes for Fe. Also, the Fe result for the control sample EF41502-SRM1 was greater than the upper limit. All Fe results and control sample EF41502-SRM1 are flagged "K" in LIMS due to a possible high bias.

For Pb, the sample concentration was greater than 2X the matrix spike concentration for

000009

EF41502-MS1 and EF41502-MS2; those spikes are flagged “#” in LIMS and considered invalid. Blank spike results are used for evaluation of matrix spike results. A linearity check sample which showed good recovery was performed during both analytical runs at 500 mg/L. No sample results exceeded that check.

For Mg, the sample concentration for the control sample EF41502-SRM1 was such that dilution was required. Reported results reflect the 10X dilution.

For Mn, the results for EF41502-MS2 was greater than 110% of the calibration; a 2X dilution was performed and results reported from that dilution.

For Na, the digestion blank EF41502-BLK1 showed Na above the MDL; however, the result was too low to affect sample results.

For Zn, the sample concentration was greater than 2X the matrix spike concentration for EF41502-MS1; that spike is flagged “#” in LIMS and considered invalid. EF41502-MS2 is used for evaluation of spike results. The result for that sample was above the calibrated range of the instrument; a 2X dilution was performed and results reported from that dilution.

All flagged results except those flagged “<5X” and “#” are considered estimated.

#### Other comments

No samples were identified as field duplicates.

It has been observed that, due to differences in the significant figures used for calculation, RPD values calculated by LIMS are not correct.

7/2/04  
JF  
000010



**Alion Science and Technology ESAT Region 5**

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Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

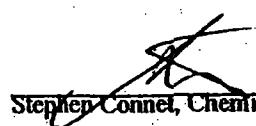
Reported:  
Jun-29-04 15:29

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
X201	E406001-01	Soil	Jun-03-04 10:30	Jun-04-04 13:24
X202	E406001-02	Soil	Jun-03-04 11:00	Jun-04-04 13:24
X203	E406001-03	Soil	Jun-03-04 11:45	Jun-04-04 13:24
X204	E406001-04	Soil	Jun-03-04 12:15	Jun-04-04 13:24
X205	E406001-05	Soil	Jun-03-04 15:40	Jun-04-04 13:24
X206	E406001-06	Soil	Jun-03-04 15:50	Jun-04-04 13:24
X207	E406001-07	Soil	Jun-03-04 16:15	Jun-04-04 13:24
X208	E406001-08	Soil	Jun-03-04 16:20	Jun-04-04 13:24
X209	E406001-09	Soil	Jun-03-04 15:55	Jun-04-04 13:24

6-29-04

000011

  
Stephen Connel, Chemist

Report Name: E406001

Page 1 of 8

**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-29-04 15:29**Metals by ICP****Alion - ESAT Contract**

X201 (E406001-01) Soil Sampled: Jun-03-04 10:30 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	6100		6.0	20	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Barium	150		0.24	0.80					
Beryllium	0.43		0.040	0.10					
Cadmium	2.1		0.48	1.6					
Calcium	29000		6.8	20					
Chromium	17		1.4	5.0					
Cobalt	6.9		1.2	4.0					
Copper	150	L	0.30	1.0					
Iron	36000	K	3.6	12					
Lead	48000		16	50					
Magnesium	16000		6.0	18					
Manganese	600		0.16	0.50					
Nickel	22		1.6	7.0					
Potassium	980		20	64					
Silver	1.2	K	0.40	1.2					
Sodium	350		6.0	20					
Vanadium	17		1.4	5.0					
Zinc	540		1.4	5.0					

X202 (E406001-02) Soil Sampled: Jun-03-04 11:00 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7400		6.0	20	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Barium	230		0.24	0.80					
Beryllium	0.53		0.040	0.10					
Cadmium	4.5		0.48	1.6					
Calcium	31000		6.8	20					
Chromium	39		1.4	5.0					
Cobalt	7.4		1.2	4.0					
Copper	260	L	0.30	1.0					
Iron	47000	K	3.6	12					
Lead	67000		16	50					
Magnesium	17000		6.0	18					
Manganese	470		0.16	0.50					

6-29-04

000012

Report Name: E406001

Page 2 of 8

**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-29-04 15:29**Metals by ICP**  
**Alion - ESAT Contract**

X202 (E406001-02) Soil Sampled: Jun-03-04 11:00 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	38		1.6	7.0	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Potassium	960		20	64		-	-	-	-
Silver	1.4	K	0.40	1.2		-	-	-	-
Sodium	280		6.0	20		-	-	-	-
Vanadium	18		1.4	5.0		-	-	-	-
Zinc	720		1.4	5.0		-	-	-	-

X203 (E406001-03) Soil Sampled: Jun-03-04 11:45 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7600		6.0	20	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Barium	130		0.24	0.80		-	-	-	-
Beryllium	0.51		0.040	0.10		-	-	-	-
Cadmium	2.0		0.48	1.6		-	-	-	-
Calcium	24000		6.8	20		-	-	-	-
Chromium	17		1.4	5.0		-	-	-	-
Cobalt	7.1		1.2	4.0		-	-	-	-
Copper	56	L	0.30	1.0		-	-	-	-
Iron	27000	K	3.6	12		-	-	-	-
Lead	6000		16	50		-	-	-	-
Magnesium	11000		6.0	18		-	-	-	-
Manganese	700		0.16	0.50		-	-	-	-
Nickel	25		1.6	7.0		-	-	-	-
Potassium	1700		20	64		-	-	-	-
Silver	0.61	J, K	0.40	1.2		-	-	-	-
Sodium	97		6.0	20		-	-	-	-
Vanadium	22		1.4	5.0		-	-	-	-
Zinc	320		1.4	5.0		-	-	-	-

6-29-04

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Report Name: E406001

Page 3 of 8

**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-29-04 15:29**Metals by ICP**  
**Alion - ESAT Contract**

X204 (E406001-04) Soil Sampled: Jun-03-04 12:15 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	8200		6.0	20	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Barium	130		0.24	0.80					
Beryllium	0.65		0.040	0.10					
Cadmium	1.3	J	0.48	1.6					
Calcium	25000		6.8	20					
Chromium	18		1.4	5.0					
Cobalt	6.7		1.2	4.0					
Copper	120	L	0.30	1.0					
Iron	28000	K	3.6	12					
Lead	5200		16	50					
Magnesium	13000		6.0	18					
Manganese	540		0.16	0.50					
Nickel	22		1.6	7.0					
Potassium	1100		20	64					
Silver	0.49	J, K	0.40	1.2					
Sodium	130		6.0	20					
Tanadium	22		1.4	5.0					
Zinc	320		1.4	5.0					

X205 (E406001-05) Soil Sampled: Jun-03-04 15:40 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	8800		6.0	20	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Barium	120		0.24	0.80					
Beryllium	0.56		0.040	0.10					
Cadmium	0.56	J	0.48	1.6					
Calcium	39000		6.8	20					
Chromium	16		1.4	5.0					
Cobalt	6.7		1.2	4.0					
Copper	74	L	0.30	1.0					
Iron	23000	K	3.6	12					
Lead	1900		16	50					
Magnesium	22000		6.0	18					
Manganese	370		0.16	0.50					

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00001 ~6-29-04

**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605

Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-29-04 15:29

**Metals by ICP**  
**Alion - ESAT Contract**

X205 (E406001-05) Soil Sampled: Jun-03-04 15:40 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	21		1.6	7.0	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Potassium	1000		20	64					
Silver	0.84	J, K	0.40	1.2					
Sodium	4600		6.0	20					
Vanadium	25		1.4	5.0					
Zinc	410		1.4	5.0					

X206 (E406001-06) Soil Sampled: Jun-03-04 15:50 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	8200		6.0	20	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Barium	110		0.24	0.80					
Beryllium	0.57		0.040	0.10					
Cadmium	1.9		0.48	1.6					
Calcium	40000		6.8	20					
Chromium	34		1.4	5.0					
Cobalt	5.9		1.2	4.0					
Copper	77	L	0.30	1.0					
Iron	26000	K	3.6	12					
Lead	3100		16	50					
Magnesium	21000		6.0	18					
Manganese	470		0.16	0.50					
Nickel	19		1.6	7.0					
Potassium	1000		20	64					
Silver	0.89	J, K	0.40	1.2					
Sodium	8000		6.0	20					
Vanadium	23		1.4	5.0					
Zinc	260		1.4	5.0					

Stephen Conner, Chemist

6-29-04

000015

Report Name: E406001

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**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-29-04 15:29**Metals by ICP**  
**Alion - ESAT Contract**

X207 (E406001-07) Soil Sampled: Jun-03-04 16:15 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	8600		6.0	20	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Barium	170		0.24	0.80					
Beryllium	0.54		0.040	0.10					
Cadmium	2.1		0.48	1.6					
Calcium	16000		6.8	20					
Chromium	18		1.4	5.0					
Cobalt	6.1		1.2	4.0					
Copper	260	L	0.30	1.0					
Iron	30000	K	3.6	12					
Lead	4800		16	50					
Magnesium	8400		6.0	18					
Manganese	430		0.16	0.50					
Nickel	27		1.6	7.0					
Potassium	940		20	64					
Silver	0.49	J, K	0.40	1.2					
Sodium	2800		6.0	20					
Vanadium	23		1.4	5.0					
Zinc	560		1.4	5.0					

X208 (E406001-08) Soil Sampled: Jun-03-04 16:20 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7400		6.0	20	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Barium	150		0.24	0.80					
Beryllium	0.59		0.040	0.10					
Cadmium	2.2		0.48	1.6					
Calcium	42000		6.8	20					
Chromium	18		1.4	5.0					
Cobalt	6.4		1.2	4.0					
Copper	120	L	0.30	1.0					
Iron	32000	K	3.6	12					
Lead	8600		16	50					
Magnesium	22000		6.0	18					
Manganese	490		0.16	0.50					

**Alion Science and Technology ESAT Region 5**538 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-29-04 15:29**Metals by ICP**  
**Alion - ESAT Contract**

X208 (E406001-08) Soil Sampled: Jun-03-04 16:20 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nickel	25		1.6	7.0	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Potassium	1000		20	64					
Silver	0.90	J, K	0.40	1.2					
Sodium	370		6.0	20					
Vanadium	20		1.4	5.0					
Zinc	480		1.4	5.0					

X209 (E406001-09) Soil Sampled: Jun-03-04 15:55 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	9800		6.0	20	mg/kg	1	EF41502	Jun-15-04	Jun-23-04
Barium	120		0.24	0.80					
Beryllium	0.66		0.040	0.10					
Cadmium	2.1		0.48	1.6					
Calcium	26000		6.8	20					
Chromium	17		1.4	5.0					
Cobalt	6.3		1.2	4.0					
Copper	83	L	0.30	1.0					
Iron	27000	K	3.6	12					
Lead	2600		16	50					
Magnesium	15000		6.0	18					
Manganese	340		0.16	0.50					
Nickel	30		1.6	7.0					
Potassium	1160		20	64					
Silver	0.78	J, K	0.40	1.2					
Sodium	4900		6.0	20					
Vanadium	25		1.4	5.0					
Zinc	390		1.4	5.0					

**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-29-04 15:29**Notes and Definitions**

- # Spike audit not valid. The sample concentration exceeds twice the concentration of the spike added. No qualification made for this QC audit.
- <5X One or both concentration values for the duplicate analysis audit were less than 5 times the MDL value AND the difference between the two values was less than the MDL value. The duplicate audit is acceptable. No qualification made for this QC audit.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- U Not Detected
- NR Not Reported

6-29-04

000018

Report Name: E406001

Page 8 of 8



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: JUL 06 2004

Subject: Review of Region 5 Data for **Gilbert Landfill**

From: **Stephen Connet, Chemist, Alion Science and Technology / ESAT**  
Contractor to Region 5 Central Regional Laboratory

Submitted to CRL on 7-6-04 *[Signature]*

NOT AVAILABLE  
ON 7-2-

To:

Attached are the results for: **Gilbert Landfill**

CRL data set numbers: **E406001**

Samples analyzed for: **GFAA Arsenic, Selenium**

Results are reported for sample designations: **E406001-01 thru -09**

RECEIVED  
COMPTROLLER BRANCH  
2004 JUL -7 PM 2:52  
ENVIRONMENTAL  
PROTECTION AGENCY  
REGION V

*William Sauer Jr.*

JUL 06 2004

Data Management Coordinator and Date Received

Date Transmitted: JUL 06 2004

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

/ /  
Received by and Date

Comments:

Attached are the results for: **Gilbert Landfill**

CRL data set numbers: **E406001**

Samples analyzed for: **GFAA Arsenic, Selenium**

Results are reported for sample designations: **E406001-01 thru -09**

**Method: 200.9 (GFAA Metals)**  
**Site: Gilbert Landfill**  
**Date: June 29, 2004**  
**Prepared by: Stephen Connet**

**TDF: 5-22-025**  
**Alion Job #: 246-0-1476-202-077-002**  
**Task Order #: 05-1-22**  
**Data Set: E406001**

**NARRATIVE**

Nine (9) soil samples from the Gilbert LF site were collected on June 3, 2004 and were received by CRL on June 4, 2004. The samples were received at a temperature of 11.6 °C. The samples were submitted to ESAT for analysis of arsenic and selenium by GFAA. The sample point identifications are on the first page of the LIMS report following this narrative.

The samples were digested following standard CRL 200.2 hot block digestion protocols (CRL SOP METALS025) on June 15, 2004 (digestion batch EF41502). All analyses were performed between June 16 and 29, 2004 using 200.9 methods (CRL SOP's METALS019). QC limits are based on ESAT control limits; CRL default limits are used if ESAT limits are greater than CRL limits. Soil LCS values for arsenic and selenium are based on ESAT "floating means" per Dr. J. V. Morris of U.S. EPA.

No samples are identified as field duplicates. Because reported QC values are less than 5 times the MDL for the selenium duplicate, the duplicate difference criteria are used for control purposes for selenium; the matrix duplicate EF41502-DUP1 for selenium is flagged "<5X" in LIMS. It has been observed that, due to differences in the significant figures used for calculation, RPD values calculated by LIMS are not correct. All QC were within limits. All samples were analyzed within the holding time limit.

Non-detect results are reported to the reporting limit (RL). The following results between the method detection limit (MDL) and the RL are reported as the instrument value with a "J" flag and are considered estimated: E406001-04, -06, -07 and -09 for selenium. The presence of interference required some samples to be diluted in order to meet analytical spike recovery criteria. All reported values are adjusted for dilution except E406001-04 through -07 and -09 selenium. All unflagged sample results are acceptable. Where appropriate, reported values are dilution corrected.

QC reports which include analytical QC are provided as Lotus spreadsheets. Logbook entries for this metals analysis can be found in Alion logbook C31845 page 19.

*[Handwritten signature]*  
6-29-04  
000007



Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

**Alion Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-29-04 12:31

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
X201	E406001-01	Soil	Jun-03-04 10:30	Jun-04-04 13:24
X202	E406001-02	Soil	Jun-03-04 11:00	Jun-04-04 13:24
X203	E406001-03	Soil	Jun-03-04 11:45	Jun-04-04 13:24
X204	E406001-04	Soil	Jun-03-04 12:15	Jun-04-04 13:24
	E406001-05	Soil	Jun-03-04 15:40	Jun-04-04 13:24
X206	E406001-06	Soil	Jun-03-04 15:50	Jun-04-04 13:24
X207	E406001-07	Soil	Jun-03-04 16:15	Jun-04-04 13:24
X208	E406001-08	Soil	Jun-03-04 16:20	Jun-04-04 13:24
X209	E406001-09	Soil	Jun-03-04 15:55	Jun-04-04 13:24

**ALION Science and Technology ESAT Region 5**

536 South Clark Street, Suite 734; Chicago, IL 60605

Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jun-29-04 12:31

**Metals by GFAA  
Alion - ESAT Contract****X201 (E406001-01) Soil Sampled: Jun-03-04 10:30 Received: Jun-04-04 13:24**

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	33		1.0	4.0	mg/kg	10	EF41502	Jun-15-04	Jun-17-04
Selenium	U		1.0	4.0	"	5	"	"	Jun-16-04

**X202 (E406001-02) Soil Sampled: Jun-03-04 11:00 Received: Jun-04-04 13:24**

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	60		2.0	8.0	mg/kg	20	EF41502	Jun-15-04	Jun-17-04
Selenium	U		1.0	4.0	"	5	"	"	Jun-29-04

**X203 (E406001-03) Soil Sampled: Jun-03-04 11:45 Received: Jun-04-04 13:24**

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	15		0.50	2.0	mg/kg	5	EF41502	Jun-15-04	Jun-17-04
Selenium	U		0.40	1.6	"	2	"	"	Jun-17-04

**X204 (E406001-04) Soil Sampled: Jun-03-04 12:15 Received: Jun-04-04 13:24**

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	15		0.50	2.0	mg/kg	5	EF41502	Jun-15-04	Jun-17-04
Selenium	0.22	J	0.20	0.80	"	1	"	"	Jun-16-04

**X205 (E406001-05) Soil Sampled: Jun-03-04 15:40 Received: Jun-04-04 13:24**

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	11		0.30	1.2	mg/kg	3	EF41502	Jun-15-04	Jun-17-04
Selenium	U		0.20	0.80	"	1	"	"	Jun-16-04

**X206 (E406001-06) Soil Sampled: Jun-03-04 15:50 Received: Jun-04-04 13:24**

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	14		0.50	2.0	mg/kg	5	EF41502	Jun-15-04	Jun-17-04
Selenium	0.45	J	0.20	0.80	"	1	"	"	Jun-16-04

6-29-04

000009

Report Name: E406001

Page 2 of 4

**Alion Science and Technology ESAT Region 5**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307Superfunc US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard PhamReported:  
Jun-29-04 12:31**Metals by GFAA**  
**Alion - ESAT Contract**

X207 (E406001-07) Soil Sampled: Jun-03-04 16:15 Received: Jun-04-04 13:24

Analytic	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	14		0.50	2.0	mg/kg	5	EF41502	Jun-15-04	Jun-17-04
Selenium	0.34	J	0.20	0.80	"	1	"	"	Jun-16-04

X208 (E406001-08) Soil Sampled: Jun-03-04 16:20 Received: Jun-04-04 13:24

Analytic	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	19		0.50	2.0	mg/kg	5	EF41502	Jun-15-04	Jun-17-04
Selenium	U		0.60	2.4	"	3	"	"	Jun-17-04

X209 (E406001-09) Soil Sampled: Jun-03-04 15:55 Received: Jun-04-04 13:24

Analytic	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	14		0.50	2.0	mg/kg	5	EF41502	Jun-15-04	Jun-17-04
Selenium	0.26	J	0.20	0.80	"	1	"	"	Jun-16-04

6-29-09

000010



**Alion Science and Technology ESAT Region 5**

**536 South Clark Street, Suite 734; Chicago, IL 60605  
Telephone (312) 353-8302 Facsimile (312) 353-8307**

**Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604**

**Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham**

**Reported:  
Jun-29-04 12:31**

**Notes and Definitions**

- < 5X One or both concentration values for the duplicate analysis audit were less than 5 times the MDL value AND the difference between the two values was less than the MDL value. The duplicate audit is acceptable. No qualification made for this QC audit.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- U Not Detected
- NR Not Reported

*[Handwritten Signature]*  
6-29-04

**0000011**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

JUL 07 2004

Date:

Subject: Review of Region 5 Data for **Gilbert Landfill (Gilbert, IL)**

From: **Marjorie Mattox, Chemist, ESAT/ALION**

Contractor to Region 5 Central Regional Laboratory

Submitted to EPA: *Marjorie Mattox, 7-7-04*

To:

*SF  
Mike Ribordy SE-5J*

Attached are the results for: **Gilbert Landfill (Gilbert, IL)**

CRL data set number: **E406001**

Samples analyzed for: **Mercury**

Results are reported for sample designations: **E406001-01 to -09**

*Sylvia Griffin*

JUL/07/2004

Data Management Coordinator and Date Received

Date Transmitted: JUL/07/2004

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

                / /  
Received by and Date

Comments:

Attached are the results for: **Gilbert Landfill (Gilbert, IL)**

CRL data set number: **E406001**

Samples analyzed for: **Mercury**

Results are reported for sample designations: **E406001-01 to -09**

**000008**

**Parameter: Mercury**

**Method: 245.5**

**Analyst: M. Mattox** *M. Mattox*

**Date: July 6, 2004** *7-6-04*

**Work Order: E406001**

**TDF: 5-22-025**

**JOB: 246-0-1476-202-077-002**

**Task Order: 05-1-22**

**NARRATIVE**

This narrative covers the analysis of 9 soil samples from the Gilbert Landfill site. The samples were submitted to ESAT for mercury analysis. The samples were collected on June 3, 2004. The samples were received on June 4, 2004. The cooler was received at a temperature of 11.6 degrees C. All samples are qualified "J" due to improper preservation.

For a more detailed listing of sample ID, laboratory ID, field station ID, and sampling dates, refer to the Work Order pages and/or the initial LIMS report pages where such listings can be found.

All samples were analyzed within the 28 day holding time limit. Soil samples were digested on June 30, 2004 and analyzed on July 1, 2004 as LIMS batch EG40102. The initial analytical run showed that all samples except for E406001-05 were above the calibration range. The initial instrument QC was acceptable, however, the final QC could not be completed due to the detector giving a consistent ringing noise. Therefore dilutions were prepared and the final analysis was completed after a rest period and adjustment of the detector. Samples E406001-01 to -04, -06 to -09 are reported from dilutions since the initial result was above the calibration range. All matrix and instrument QC was acceptable.

The soil samples were digested by adding all reagents manually and then the samples were covered during the digestion. Digestion of the soils was done by heating the soils at 95 degrees in a water bath at two time intervals specified in method AIG043. The hydroxylamine solution was manually added prior to analysis.

Details of this analysis can be found in Alion logbook number C31849.

No field QC was present for this work order.

Results have been entered into RLIMS and matrix and digestion QC are reported on RLIMS generated reports. A QC summary is in a separate WordPerfect report.



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000009

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jul-06-04 14:41

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
X201	E406001-01	Soil	Jun-03-04 10:30	Jun-04-04 13:24
X202	E406001-02	Soil	Jun-03-04 11:00	Jun-04-04 13:24
X203	E406001-03	Soil	Jun-03-04 11:45	Jun-04-04 13:24
X204	E406001-04	Soil	Jun-03-04 12:15	Jun-04-04 13:24
X205	E406001-05	Soil	Jun-03-04 15:40	Jun-04-04 13:24
X206	E406001-06	Soil	Jun-03-04 15:50	Jun-04-04 13:24
X207	E406001-07	Soil	Jun-03-04 16:15	Jun-04-04 13:24
X208	E406001-08	Soil	Jun-03-04 16:20	Jun-04-04 13:24
X209	E406001-09	Soil	Jun-03-04 15:55	Jun-04-04 13:24

M. Mattox  
Margie Mattox, Chemist

7-6-04

Report Name: E406001 FINAL Jul 06 04 1441

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77 West Jackson Boulevard  
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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jul-06-04 14:41

**Cold Vapor Analyses**  
**Alion - ESAT Contract**

X201 (E406001-01) Soil Sampled: Jun-03-04 10:30 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.21	J	0.073	0.18	mg/kg dry	5	EG40102	Jun-30-04	Jul-01-04

X202 (E406001-02) Soil Sampled: Jun-03-04 11:00 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.16	J	0.042	0.10	mg/kg dry	3	EG40102	Jun-30-04	Jul-01-04

X203 (E406001-03) Soil Sampled: Jun-03-04 11:45 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.14	J	0.037	0.092	mg/kg dry	3	EG40102	Jun-30-04	Jul-01-04

X204 (E406001-04) Soil Sampled: Jun-03-04 12:15 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.22	J	0.069	0.17	mg/kg dry	5	EG40102	Jun-30-04	Jul-01-04

X205 (E406001-05) Soil Sampled: Jun-03-04 15:40 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.046	J	0.012	0.030	mg/kg dry	1	EG40102	Jun-30-04	Jul-01-04

X206 (E406001-06) Soil Sampled: Jun-03-04 15:50 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.17	J	0.054	0.14	mg/kg dry	5	EG40102	Jun-30-04	Jul-01-04

X207 (E406001-07) Soil Sampled: Jun-03-04 16:15 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.093	J	0.026	0.065	mg/kg dry	2	EG40102	Jun-30-04	Jul-01-04

X208 (E406001-08) Soil Sampled: Jun-03-04 16:20 Received: Jun-04-04 13:24

M. Mattox  
Margie Mattox, Chemist

7-6-04

Report Name: E406001 FINAL Jul 06 04 1441



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000011

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jul-06-04 14:41

**Cold Vapor Analyses**  
**Alion - ESAT Contract**

X208 (E406001-08) Soil Sampled: Jun-03-04 16:20 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.12	J	0.024	0.060	mg/kg dry	2	EG40102	Jun-30-04	Jul-01-04

X209 (E406001-09) Soil Sampled: Jun-03-04 15:55 Received: Jun-04-04 13:24

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.14	J	0.025	0.062	mg/kg dry	2	EG40102	Jun-30-04	Jul-01-04

M. Mattox  
Margie Mattox, Chemist

7-6-04

Report Name: E406001 FINAL Jul 06 04 1441

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**000012**

Superfund, US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jul-06-04 14:41

#### Notes and Definitions

- J The identification of the analyte is acceptable; the reported value is an estimate.  
U Not Detected  
NR Not Reported

*M. Maltox*  
Margie Maltox, Chemist

*7-6-04*

Report Name: E406001 FINAL Jul 06 04 1441

Page 4 of 4



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5 CENTRAL REGIONAL LABORATORY  
536 SOUTH CLARK STREET  
CHICAGO, ILLINOIS 60605

JUL 27 2004

Date:

Subject: Review of Region 5 Data for Gilbert Landfill (Gilbert, IL)

From: Marjorie Mattox, Chemist, ESAT/ALION  
Contractor to Region 5 Central Regional Laboratory  
Submitted to EPA: *Marjorie L. mattox, 7-23-04*

To:

Attached are the results for: Gilbert Landfill (Gilbert, IL)

CRL data set number: E406001

Samples analyzed for: ICP RCRA METALS; Ag, As, Ba, Cd, Cr, Pb, Se  
(TCLP Extract)

Results are reported for sample designations: E406001-09

*Sylvia Griffin*

JUL 27, 2004

Data Management Coordinator and Date Received

Date Transmitted: JUL 27 2004

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

**Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C**

Received by and Date

Comments:

Attached are the results for: **Gilbert Landfill (Gilbert, IL)**

CRL data set number: **E406001**

Samples analyzed for: **ICP RCRA METALS; Ag, As, Ba, Cd, Cr, Pb, Se  
(TCLP Extract)**

Results are reported for sample designations: **E406001-09**

Parameter: ICP RCRA Metals  
Method: CRL Metals 003 & Metals 025  
Analyst: M. Mattox *M. Mattox*  
Date: July 20, 2004 *7-20-04*

Work Orders: E406001 000008  
TDF: 5-22-025  
Task Order: 05-1-22  
JOB: 246-0-1476-202-077-002

### ICP NARRATIVE

This narrative covers the analysis of 1 TCLP extract from the Gilbert Landfill site. One soil sample was submitted to ESAT for TCLP extraction and ICP RCRA metals analysis. The sample was collected on June 3, 2004. The sample was received on June 4, 2004. The cooler temperature was 11.6 degrees C upon receipt.

For a more detailed listing of sample ID, laboratory ID, field station ID, and sampling dates, refer to the Work Order pages and/or the initial LIMS report pages where such listings can be found.

Routine CRL SOP Metals 025 (water) was used to prepare the TCLP extract for ICP analysis. The TCLP extraction procedure was conducted on June 30, and July 1, 2004 following CRL SOP GEN019 (Method 1311). The sample was extracted using Extraction Fluid #1. The TCLP extract was digested at a 10X dilution on July 1, 2004 as LIMS batch EG40105. This batch was analyzed with LIMS batch EG40104 using the Optima 3300 on July 8, 2004. When examining the data it was observed that the Cu showed QC problems. Also observed was the fact that the incorrect analytical method was used. Reanalysis was completed using the correct method on the Optima 3300 on July 13, 2004. During this analysis EG40105 was analyzed with no other work order due to a continuing problem with copper. CRL SOP Metals 003 protocols were used during these analyses. All samples were analyzed within the holding time limit.

### ICP RUN RESULTS

On December 3, 2003 a digestion batch of two MDL solutions was digested. The two solutions were prepared one for all analytes using low level Mg, Fe, and V, the other using only higher level Mg, Fe, and V. These solutions were analyzed on December 4, 2003. A MDL digestion was set up on December 5, 2003 for all analytes which did not pass requirements. These MDL's were analyzed on December 8, 2003. Discrepancies were found for Ca and Zn which showed a percent recovery slightly above the upper limit. These MDL's are being used as interim MDL's. Also K did not pass the 10X rule and it was discovered that Ni was left out of the December 5, 2003 solution. Therefore K and Ni are defaulted to the previous MDL determined in October as interim MDL's. Interim MDL's will be updated as soon as the opportunity arises.

Previous analyses have been performed on the Optima 4300, and due to some recent instrument problems with the Optima 4300 it was decided to use the Optima 3300 for this analysis. The Optima 3300 required maintenance which was performed during the months of March and April. ESAT did not begin using the instrument until May 28, 2004 at which time it was used to analyze soils. MDL's need to be updated due to changes made to the instrument during recent maintenance and will be performed as soon as the opportunity arises.

A RL solution was prepared on December 31, 2003 and was used in the analysis on July 13, 2004.

29 to 31 analyte lines out of a possible 78 lines available using the Optima 3300 DV method were chosen by a plan agreed upon by Dr. J. V. Morris. These are to be used for routine reporting of analyte values that appear in the QA summary reports.

### Analysis E406001 - Optima 4300 DV

The following analytes will be addressed; all other analytes will not be discussed in this case narrative:

Ag, As, Ba, Cd, Cr, Pb, Sc

000009

Two sets of QA/QC limits were provided for the LCM1, LCM2 and HI AQC. A new set of control charts has been assembled. At this point only enough data is available for the Instrument QC listed above. Since these limits will be updated following subsequent analyses, the limits are subject to change. All instrument and preparation blank data are being recorded but the limits for blanks will always be the MDL. All matrix and other preparation QC will have control limits as soon as enough data has been collected.

The following lists the case pertinent out-of-control QC audit check results based on default QA / QC (traditional) limits:

**E406001 analysis :**

**Instrument QC:**

**07/13/04 analysis:**

**Blanks: (Blank values are rounded)**

Instr. Blk 1:	Se196	15.66	ug/l
---------------	-------	-------	------

Instr. Blk 2:	Ba455	1.04	"
	Pb220	4.10	"

<b>LCM1's:</b>	<b>Percent deviation</b>		
	<b>LCM1 1:</b>	Ag328	++

<b>LCM1 2:</b>	Ag328	++
----------------	-------	----

**Matrix QC:**

<b>TCLP Extraction Fluid #1</b>	EG40105-BLK2	Ba455	19.56	"	(Raw Instrument results, prepared at a 10X dilution)
		Cr267	19.39	"	
		Pb220	45.02	"	

<b>Matrix Duplicates:</b>	EG40105-DUP1	Cd226	*, 14.9	% RPD
		Cr267	*, 14.7	ug/L difference
		Ag328, As193, Se196; <5X	(difference)	

<5X was used to point out that the duplicate difference was used for QC evaluation purposes, the RPD was not always listed on the LIMS report.

**Sample analyte qualifications:**

Compilation of control chart information is still on-going for some of the check audits from Optima analysis runs. Data is currently being gathered for some QA audits. New changes to the method due to instrument realignment has caused some analytes for the LCM1 to show results outside of the ESAT limits but within the CRL limits. Until QA data from the new changes is more complete, the default CRL limits will be used.

The ICP sample results reported are acceptable except as noted in the following paragraphs.

M. Mallett 7-20-04

000010

For Ag, LCM2 QA check audits were used for control purposes rather than LCM1 check audits since the level of Ag in the LCM1 solutions exceed the upper linear limit for Ag.

For As, the sample result showed a negative value whose absolute value was greater than the RL. Therefore the sample result for TCLP E406001-09 is flagged "L". Since this is a TCLP and subject to RCRA limits, this interference may not be a serious problem for this sample.

For Ba, a linearity check was analyzed at 30 mg/L to validate the blank spike and matrix spike values since they are above the calibration range. The linearity check showed good correlation.

For Cd, the duplicate %RPD, EG40105-DUP1, showed a result which was out of control. Therefore the sample result for TCLP E406001-09 is flagged "\*" due to possible poor precision.

For Cr, the duplicate difference, EG40105-DUP1, showed a result which was out of control. Therefore the sample result for TCLP E406001-09 is flagged "\*" due to possible poor precision. Also for Cr, the extraction blank, EG40105-BLK2 showed a result which was greater than the MDL indicating possible contamination. However, this is a TCLP extraction blank and subject to RCRA limits. The value of the extraction blank is slight compared to the RCRA limit and therefore is not used for QC qualification purposes. If RCRA limits were not considered, the sample result is at a value that would be affected. However, the extraction blank is used for qualification only if the result shows a value above the RCRA limit.

For Se, the sample result for E406001-09 is flagged "J" since the value was between the MDL and RL. Also for Se, instrument blank #1 showed a result that was above the MDL indicating possible contamination. Sample result E406001-09 is flagged "K" due to possible contamination.

All flagged results are considered estimated. All sample results are usable.

#### Other comments

It has been observed that some IIMS report RPD calculations do not match all of our in house RPD calculations due to the number of significant figures used in the calculations.

No field QC was present for this work order:

000011

**Allen Science and Technology ESAT Region 5**

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Superfund US EPA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jul-22-04 14:17

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
X309	E406001-09	Soil	Jun-03-04 15:55	Jun-04-04 13:24
SECTION 1: SAMPLE INFORMATION				
Project: Gilbert Landfill				
Location: 77 W Jackson Blvd, Chicago, IL, 60604				
Sample ID: X309				
Sample Name: Soil				
Sample Description: Soil from surface area				
Sample Type: Soil				
Sample Date: Jun-03-04				
Sample Time: 15:55				
Sample Temperature: 20.0°C				
Sample Humidity: 50%				
Sample Depth: 0-10 cm				
Sample Color: Brown				
Sample Consistency: Dry				
Sample Odor: Earthy				
Sample pH: 7.0				
Sample Specific Gravity: 1.0				
Sample Density: 1.0 g/cm³				
Sample Water Content: 10%				
Sample Organic Content: 10%				
Sample Inorganic Content: 80%				
Sample Microbial Content: Low				
Sample Fungi Content: Low				
Sample Bacteria Content: Low				
Sample Viruses Content: Low				
Sample Fungi: Yeast				
Sample Bacteria: Escherichia coli				
Sample Viruses: Hepatitis A				
Sample Fungi: Aspergillus				
Sample Bacteria: Staphylococcus aureus				
Sample Viruses: Polio				
Sample Fungi: Candida albicans				
Sample Bacteria: Streptococcus				
Sample Viruses: Herpes simplex virus				
Sample Fungi: Cryptococcus neoformans				
Sample Bacteria: Pseudomonas aeruginosa				
Sample Viruses: Adenovirus				
Sample Fungi: Trichophyton mentagrophytes				
Sample Bacteria: Escherichia coli O157:H7				
Sample Viruses: Norovirus				
Sample Fungi: Aspergillus fumigatus				
Sample Bacteria: Vibrio cholerae				
Sample Viruses: Hepatitis C virus				
Sample Fungi: Candida krusei				
Sample Bacteria: Staphylococcus epidermidis				
Sample Viruses: Hepatitis B virus				
Sample Fungi: Cryptococcus gattii				
Sample Bacteria: Escherichia coli O145:H7				
Sample Viruses: Adenovirus type 3				
Sample Fungi: Trichophyton rubrum				
Sample Bacteria: Escherichia coli O157:H7				
Sample Viruses: Norovirus				
Sample Fungi: Aspergillus fumigatus				
Sample Bacteria: Vibrio cholerae				
Sample Viruses: Hepatitis C virus				
Sample Fungi: Candida krusei				
Sample Bacteria: Staphylococcus epidermidis				
Sample Viruses: Hepatitis B virus				
Sample Fungi: Cryptococcus gattii				
Sample Bacteria: Escherichia coli O145:H7				
Sample Viruses: Adenovirus type 3				
Sample Fungi: Trichophyton rubrum				
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Sample Viruses: Adenovirus type 3				
Sample Fungi: Trichophyton rubrum				
Sample Bacteria: Escherichia coli O157:H7				
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Sample Bacteria: Escherichia coli O157:H7				
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Sample Viruses: Hepatitis C virus				
Sample Fungi: Candida krusei				
Sample Bacteria: Staphylococcus epidermidis				
Sample Viruses: Hepatitis B virus				
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Sample Bacteria: Escherichia coli O145:H7				
Sample Viruses: Adenovirus type 3				
Sample Fungi: Trichophyton rubrum				
Sample Bacteria: Escherichia coli O157:H7				
Sample Viruses: Norovirus				
Sample Fungi: Aspergillus fumigatus				
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Sample Viruses: Hepatitis C virus				
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Sample Viruses: Adenovirus type 3				
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Sample Viruses: Adenovirus type 3				
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Sample Viruses: Norovirus				
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Sample Viruses: Hepatitis B virus				
Sample Fungi: Cryptococcus gattii				
Sample Bacteria: Escherichia coli O145:H7				
Sample Viruses: Adenovirus type 3				
Sample Fungi: Trichophyton rubrum				
Sample Bacteria: Escherichia coli O157:H7				
Sample Viruses: Norovirus				
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Sample Bacteria: Vibrio cholerae				
Sample Viruses: Hepatitis C virus				
Sample Fungi: Candida krusei				
Sample Bacteria: Staphylococcus epidermidis				
Sample Viruses: Hepatitis B virus				
Sample Fungi: Cryptococcus gattii				



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 77 West Jackson Boulevard  
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Project: Gilbert Landfill  
 Project Number: [none]  
 Project Manager: Howard Pham

Reported:  
 Jul-22-04 14:17

**Metals by ICP, TCLP Extract**  
**Alion - ESAT Contract**

X209 (E406001-09) Soil Sampled: Jun-03-04 15:55 Received: Jun-04-04 13:24

Analytic	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U	L	140	500	ug/L	1	EG40105	Jul-01-04	Jul-13-04
Barium	876		6.0	20.0	-	-	-	-	-
Cadmium	25.0	*	3.0	10.0	-	-	-	-	-
Chromium	21.7	*	6.0	20.0	-	-	-	-	-
Lead	44400		40.0	200	-	-	-	-	-
Selenium	242	J, K	110	400	-	-	-	-	-
Silver	U		9.0	40.0	-	-	-	-	-

M. Mattox 7-22-04  
 Marge Mattox, Chemist

Report Name: E406001 FINAL Jul 22 04 1417

Page 2 of 3



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000013  
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Project: Gilbert Landfill  
Project Number: [none]  
Project Manager: Howard Pham

Reported:  
Jul-22-04 14:17

#### Notes and Definitions

L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.

K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

J The identification of the analyte is acceptable; the reported value is an estimate.

H One or both concentration values for the duplicate analysis audit were less than 5 times the MDL value AND the difference between the two values was less than the MDL value. The duplicate audit is acceptable. No qualification made for this QC audit.

G The duplicate analysis precision is not within control limits. The reported value is estimated.

U Not Detected

NR Not Reported

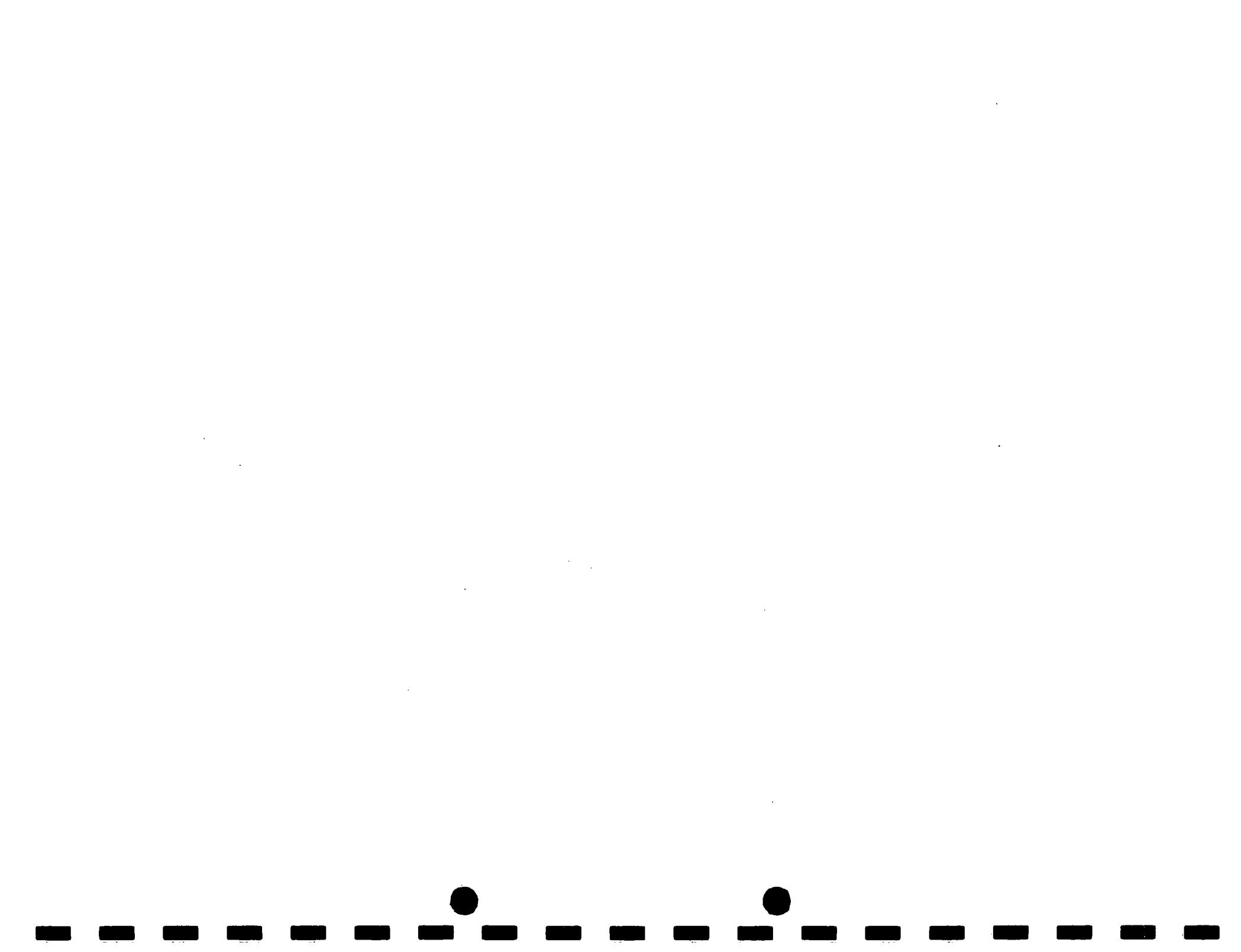
M. Mattox 7-22-04

Margie Mattox, Chemist



**ATTACHMENT C**

**TABLES**



**Table 1**  
**Gilberts Kedzie Site Assessment**  
**Lead Screening and Sampling Results**

Sample ID	IEPA Survey ID Number	Sample Date	Depth	XRF(a)	Depth (b)	Total Lead Results <sup>(c)</sup>	TCLP Lead Results <sup>(d)(e)</sup>
			Feet	mg/kg	Feet	mg/kg	mg/L
NS	43 Gold	4/29/2004	surface	4,310.0		NA	NA
NS	59	4/29/2004	surface	105.0		NA	NA
NS	60	4/29/2004	surface	11,500.0		NA	NA
NS	61	4/29/2004	surface	1,000.0		NA	NA
NS	62	4/29/2004	surface	1,200.0		NA	NA
NS	75	4/29/2004	surface	1,630.0		NA	NA
NS	75 Gold	4/29/2004	surface	1,850.0		NA	NA
NS	84 Gold	4/29/2004	surface	520.0		NA	NA
NS	170	4/29/2004	surface	13,233.9		NA	NA
X101	161	4/28/2004	surface	595.7		NA	NA
X102		4/28/2004	surface	2,331.0	0-1	6,500.0	38.3
X103	9	4/28/2004	surface	171,189.6	0-1	52,000.0	20.7
	9		1	2,616.1			
	10		2	78.3			
	13		3	93.2			
X104	14	4/28/2004	surface	56,084.7	0-1	15,000.0	NA
	15		1	247.0			
	16		2	80.0			
	17		3	77.4			
X105	18	4/28/2004	surface	97,600.5	0-1	5,600.0	33.4
	19		1	599.7			
	20		2	189.8			
	21		3	85.9			
X106	23	4/28/2004	surface	58,431.5	0-2	750.0	NA
	24		1	154.8			
	25		2	168.1			
	26		3	97.5			
X107	33	4/28/2004	surface	51,879.0		NA	NA
	34		1	211.0			
	35		2	159.7			
	36		3	374.8			
X108	29	4/28/2004	surface	9,708.6		NA	NA
	30		1	211.8			
	31		2	188.1			
	32		3	172.1			
X109	38	4/28/2004	surface	93,423.8		NA	NA
	39		1	1,238.0			
	40		2	163.9			
	41		3	189.2			
X110	44	4/28/2004	surface	8,585.0		NA	NA
	46		1	194.3			
	47		2	189.1			
	48		3	138.8			

**Table 1**  
**Gilberts Kedzie Site Assessment**  
**Lead Screening and Sampling Results**

Sample ID	IEPA Survey ID Number	Sample Date	Depth	XRF(a)	Depth (b)	Total Lead Results <sup>(c)</sup>	TCLP Lead Results <sup>(d)(e)</sup>
			Feet	mg/kg	Feet	mg/kg	mg/L
X111	54	4/28/2004	surface	250.3			
	55		1	130.9			NA
	56		2	148.5			NA
	57		3	154.6			
X112	58	4/28/2004	surface	57,187.0			
	61		1	1,499.0			NA
	59		2	126.3			NA
	60		3	178.6			
X113	62	4/28/2004	surface	172,186.5	0-1	120,000.0	NA
	63		1	2,497.1			
	64		2	115.8			
	65		3	189.0			
X114	68	4/28/2004	surface	3,840.0			
	69		surface.75	4,133.0	0-1	3,200.0	NA
	70		1	134.0			
	71		2	122.8			
	72		3	102.7			
X115	X115	4/28/2004	surface	NA			
	73		1	117.3			NA
	74		2	135.6			NA
	75		3	144.1			
X116	76	4/28/2004	surface	9,854.4	0-1	43,000.0	NA
	77		1	16,078.4			
	78		2	160.5			
	79		3	123.2			
X117	80	4/28/2004	surface	4,401.3			
	81		surface.5	588.3	0-1	9,600.0	NA
	82		1	413.2			
	83		2	120.9			
	84		3	149.2			
X118	85	4/28/2004	surface	35,457.4	0-1	63,000.0	NA
	86		1	467.3			
	90		2	103.2			
	91		3	110.2			
X119	NA	4/28/2004	surface	121,000.0	0-1	55,000.0	NA
	92		1	622.2			
	93		2	99.2			
	94		3	110.0			
X120	95	4/28/2004	surface	38,000.0	0-1	5,600.0	NA
	96		1	944.1			
	97		2	80.4			
	98		3	117.0			
X121	99	4/28/2004	surface	47,200.0	0-1	120,000.0	678
	100		1	2,259.9			
	101		2	326.7			
	102		3	121.1			

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**Lead Screening and Sampling Results**

Sample ID	IEPA Survey ID Number	Sample Date	Depth	XRF(a)	Depth (b)	Total Lead Results <sup>(c)</sup>	TCLP Lead Results <sup>(d)(e)</sup>
			Feet	mg/kg	Feet	mg/kg	mg/L
X122		4/28/2004	surface-1	BDL		NA	NA
X123	118	4/28/2004	surface	31,948.7	0-1	7,500.0	164
	120		1	46.1			
	121		2	21.6			
	122		3	21.5			
X124		4/28/2004	surface	85,100.0	0-1	400.0	NA
	102		1	1,565.0			
	103		2	867.0			
	104		3	99.4			
X125	X125	4/29/2004	surface	BDL		NA	NA
X126	108	4/29/2004	surface	35,859.1		NA	NA
	109		1	5,472.9			
	110		2	780.4			
	112		3	59.2			
X127	113	4/29/2004	surface	237,054.3	0-1	27,000.0	NA
	114		1	914.0			
	115		2	199.0			
	117		3	44.8			
X128	123	4/29/2004	surface	31,998.8	0-1	27,000.0	142
	124		1	831.9			
	125		2	89.5			
	126		3	30.5			
X129	127	4/29/2004	surface	6,935.6	0-1	900.0	0.5
	128		1	61.0			
	130		2	265.2			
	131		3	29.5			
X130	132	4/29/2004	surface	3,797.0	0-1	NA	NA
	133		1	4,906.0			
	135		2	53.9			
	137		3	52.6			
X131		4/29/2004	surface	28,695.7	0-1	47,000.0	NA
	140		1	4,369.7			
	142		2	141.1			
	144		3	26.7			
X132		4/29/2004	surface	12,930.9	0-1	1,000.0	NA
	146		1	4,292.4			
	148		2	130.9			
	149		3	48.5			
X133	X133	4/29/2004	surface	1,580.0		NA	NA
X134	X134	4/29/2004	surface	BDL		NA	NA
X135	X135	4/29/2004	surface	BDL		NA	NA
X136	X136	4/29/2004	surface	BDL		NA	NA
X137	X137	4/29/2004	surface	133.0		NA	NA
X138	X138	4/29/2004	surface	258.0		NA	NA
X139	X139	4/29/2004	surface	381.0		NA	NA

**Table 1**  
**Gilberts Kedzie Site Assessment**  
**Lead Screening and Sampling Results**

Sample ID	IEPA Survey ID Number	Sample Date	Depth	XRF(a)	Depth (b)	Total Lead Results <sup>(c)</sup>	TCLP Lead Results <sup>(d)(e)</sup>
			Feet	mg/kg	Feet	mg/kg	mg/L
X140	150	4/29/2004	surface	196.0		NA	NA
	151		1	77.0			
	152		2	81.4			
	153		3	36.7			
X141	154	4/29/2004	surface	153.0		NA	NA
	155		1	4,338.9			
	156		2	106.1			
	157		3	59.4			
X142	X142	4/29/2004	surface	8,420.0	0-1	5,400.0	7.6
X143	158	4/29/2004	surface	877.1			
	159		1	91.9		NA	NA
	160		2	455.5			
X144	162	4/29/2004	surface	889.5			
	163		1	161.3		NA	NA
	164		2	11.9			
	165		3	39.9			
X145	166	4/29/2004	surface	49.1			
	167		1	111.0		NA	NA
	168		2	14.7			
	169		3	26.9			
X146A	GoldX146	4/29/2004	surface	773.0		NA	NA
X146	172	4/29/2004	surface	432.6			
	173		1	95.4		NA	NA
	174		2	26.9			
	175		3	40.6			
X147	X147	4/29/2004	surface	524.0		NA	NA
X148	X148	4/29/2004	surface	268.0		NA	NA
X149	X149	4/29/2004	surface	404.0	0-1	620.0	0.18
X150	X150	4/29/2004	surface	2,210.0		NA	NA
X151	X151	4/29/2004	surface	1,850.0		NA	NA
X152	X152	4/29/2004	surface	157.0		NA	NA
X153	X153	4/29/2004	surface	688.0	0-1	360.0	0.05

(a) XRF reading taken by IEPA.

(b) 1 foot composite of the core.

(c) Analytical results compared to Section 35 Illinois Administrative Code, Part 742 - Tiered Approach to Corrective Action Objectives.

(d) Analytical results compared to 40 CFR 261.24..

(e) Final results not received upon date of report, therefore, preliminary analytical results are reported

**Bold Items** - above comparison criteria.

BDL - below detection limit

IEPA - Illinois Environmental Protection Agency

NA - sample not analyzed

NS - not sampled

mg/kg - milligrams per kilogram

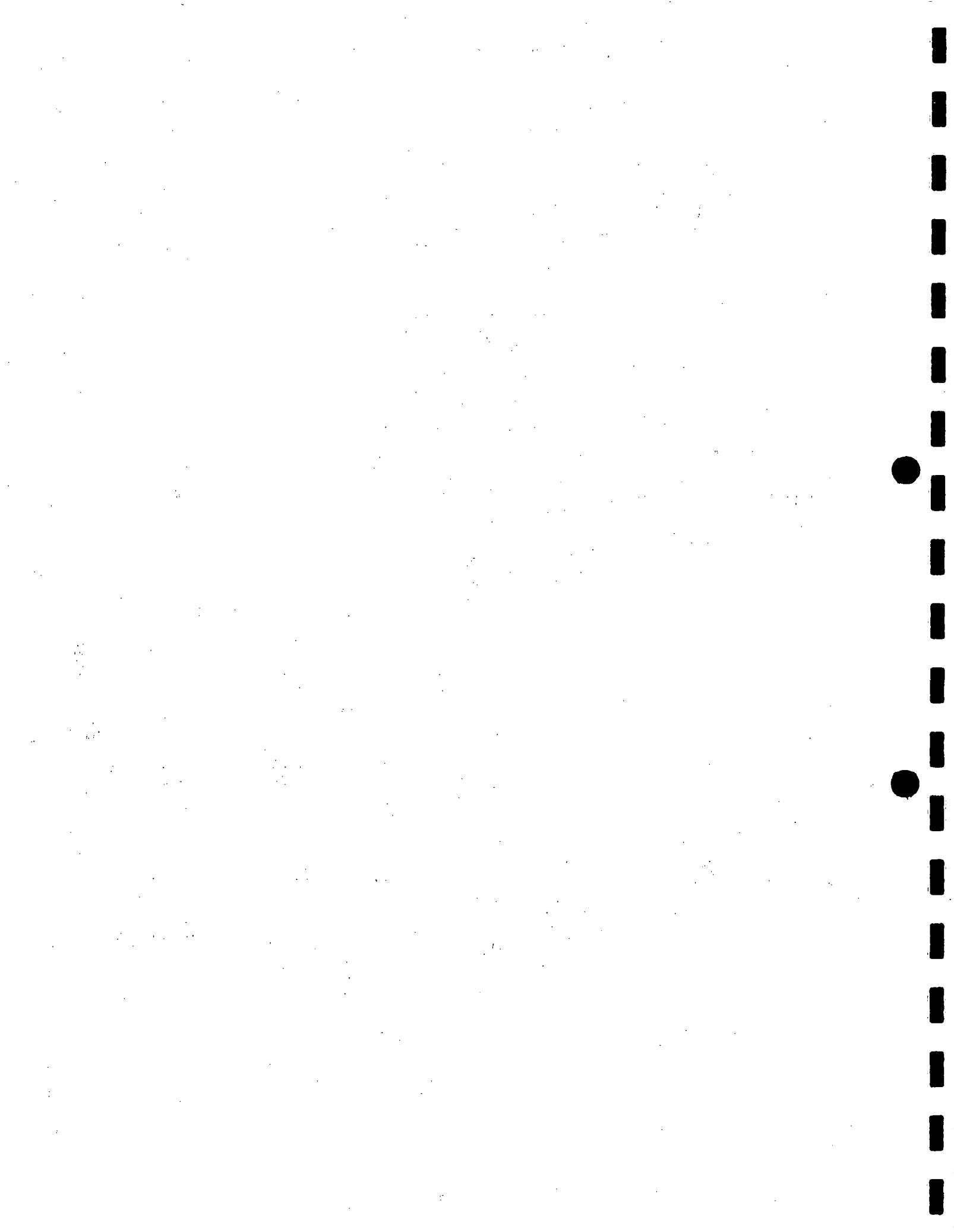
mg/L - milligrams per liter

TCLP - Toxicity Characteristic Leaching Procedure

XRF - X-Ray Fluorescence Spectrometer

**Table 2**  
**Tower Hill Road Site Assessment**  
**Lead Screening and Sampling Results**

Sample ID	Tower Hill Road Property	IEPA Survey ID Number	Sample Date	Depth	XRF (a)	Depth (b)	Total Lead Results <sup>(c)</sup>	TCLP Lead Results <sup>(d)</sup>
				Feet	mg/kg	Feet	mg/kg	mg/L
X201	Village	1	6/3/2004	surface	8,592.4	0-1	48,000.0	NA
				1'	18,559.3			
				2	142,216.8			
				3	487.1			
				4	279.9			
NS	Village	2	6/3/2004	surface	10,705.5			
				1'	47,377.6			
				2	288.2			
				3	133.6			
				4	64.9			
X202	Village	3	6/3/2004	surface	8,562.4	1-2	67,000.0	NA
				1	33,063.8			
				2	283.9			
				3	116.8			
				4	12,168.8			
NS	Village	4	6/3/2004	surface	2,145.7			
				1	17,455.5			
				2	147.1			
				3	84.7			
				surface	5,775.0			
X203	Railroad	5	6/3/2004	surface	3,801.9	0-1	6,000.0	NA
				1	5,774.6			
				2	56.1			
				3	22.3			
				surface	1,239.0			
NS	Railroad	6	6/3/2004	1	129.6			
				2	32.8			
				surface	1,292.6			
X204	Railroad	7	6/3/2004	1	6,981.0	1-2	5,200.0	NA
				2	37.2			
				3	30.4			
				surface	756.2			
				surface	705.6			
NS	Village	8	6/3/2004	1	38.8			
				2	29.2			
				3	35.5			
				surface	83.6			
				1	33.3			
NS	Tower	9	6/3/2004	2	43.2			
				surface	61.4			
				1	25.2			
				2	37.7			
				surface	23.9			
NS	Tower	10	6/3/2004	1	22.3			
				2	24.1			
				surface	39.6			
				1	27.7			
				2	28.9			



**Table 2**  
**Tower Hill Road Site Assessment**  
**Lead Screening and Sampling Results**

Sample ID	Tower Hill Road Property	IEPA Survey ID Number	Sample Date	Depth	XRF (a)	Depth (b)	Total Lead Results <sup>(c)</sup>	TCLP Lead Results <sup>(d)</sup>
				Feet	mg/kg	Feet	mg/kg	mg/L
NS	Tower	13	6/3/2004	surface	59.2			
				1	23.1			
				2	22.8			
NS	Tower	14	6/3/2004	surface	6,194.1			
				1	102.4			
				2	21.6			
X205	Village	15	6/3/2004	surface	946.1			
				1	1,086.0	1-2	1,900.0	NA
				2	949.5			
				3	1,010.8			
				4	56.5			
X206	Railroad	16	6/3/2004	surface	108.9			
				1	1,737.4	1-2	3,100.0	NA
				2	1,201.2			
				3	-			
				4	24.7			
X207	Tower	17	6/3/2004	surface	667.3			
				1	511.3			
				2	274.3			
				3	2,282.7	3-4	4,800.0	NA
				4	59.6			
NS	Village	18	6/3/2004	surface	461.7			
				1	9.0			
				2	2,542.3			
				2.5	1,316.6			
				3	62.9			
NS	Tower	19	6/3/2004	surface	260.1			
				1	6.8			
				2	17.1			
NS	Village	20	6/3/2004	surface	360.4			
				1	2,374.8			
				2	20.3			
				3	24.8			
X208	Village	21	6/3/2004	surface	3,312.0			
				1	1,159.4			
				2	12,007.0	2.0	8,600.0	NA
				3	35.0			
				4	43.3			
X209	Village	3	6/3/2004		5,775.0	0-1	2,600.0	44.4
NS	Railroad	22	6/3/2004	surface	572.4			
				1	72.6			
				2	24.7			
				3	23.1			
NS	Railroad	23	6/3/2004	surface	732.3			
				1	15.0			
				2	18.7			
NS	Railroad	24	6/3/2004	surface	157.1			
				1	22.6			
				2	45.8			

**Table 2**  
**Tower Hill Road Site Assessment**  
**Lead Screening and Sampling Results**

Sample ID	Tower Hill Road Property	IEPA Survey ID Number	Sample Date	Depth	XRF (a)	Depth (b)	Total Lead Results <sup>(c)</sup>	TCPL Lead Results <sup>(d)</sup>
				Feet	mg/kg	Feet	mg/kg	mg/L
NS	Railroad	25	6/3/2004	surface	305.4			
				1	725.1			
				2	98.0			
				3	31.3			
NS	Railroad	26	6/3/2004	surface	92.6			
				1	2,904.6			
				2	129.1			
				3	25.1			
NS	Village	27	6/3/2004	surface	958.8			
				1	72.8			
				2	64.4			
NS	Village	28	6/3/2004	surface	45.9			
				1	6,281.6			
				2	138.4			
				3	53.0			
				4	25.9			
NS	Village	29	6/3/2004	surface	463.4			
				1	4,327.3			
				2	63.7			
				3	23.5			
				4	17.2			
NS	Village	30	6/3/2004	surface	259.8			
				1	1,350.7			
				2	31.8			
				3	28.8			
NS	Railroad	31	6/3/2004	surface	279.8			
				1	32.5			
				2	38.7			
NS	Railroad	32	6/3/2004	surface	4,100.6			
				surface	7,758.2			
				1	4,076.4			
				2	40.4			
				3	31.7			
NS	Railroad	174	6/4/2004	surface	755.4			
NS	Village	171	6/4/2004	surface	841.8			
NS	Village	172	6/4/2004	surface	122.8			
NS	Tower	177	6/4/2004	surface	201.9			
NS	Tower	178	6/4/2004	surface	14,623.9			
NS	Tower	180	6/4/2004	surface	92,808.5			
NS	Village	181	6/4/2004	surface	7,820.2			
NS	Village	182	6/4/2004	surface	30,652.9			
NS	Village	183	6/4/2004	surface	33,807.5			
NS	Tower	184	6/4/2004	surface	1,960.9			
NS	Tower	185	6/4/2004	surface	65,516.5			
NS	Tower	186	6/4/2004	surface	2,130.6			
NS	Tower	187	6/4/2004	surface	222.0			
NS	Village	189	6/4/2004	surface	1,822.8			
NS	Village	190	6/4/2004	surface	1,906.3			
NS	Village	191	6/4/2004	surface	7,554.4			
NS	Village	192/193	6/4/2004	surface	2,634.5			
NS	Village	194	6/4/2004	surface	2,564.4			

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**Tower Hill Road Site Assessment**  
**Lead Screening and Sampling Results**

Sample ID	Tower Hill Road Property	IEPA Survey ID Number	Sample Date	Depth	XRF (a)	Depth (b)	Total Lead Results <sup>(c)</sup>	TCLP Lead Results <sup>(d)</sup>
					Feet	mg/kg	Feet	mg/kg
NS	Village	195	6/4/2004	surface	161.0			
NS	Village	196	6/4/2004	surface	213.1			
NS	Village	197	6/4/2004	surface	21,339.3			
NS	Village	198	6/4/2004	surface	2,603.5			
NS	Village	199	6/4/2004	surface	15,738.3			

(a) XRF reading taken by IEPA.

(b) 1 foot composite of the core.

(c) Analytical results compared to Section 35 Illinois Administrative Code, Part 742 - Tiered

(d) Analytical results compared to 40 CFR 261.24..

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